# A Lecture
ON THE
# STUDY OF HUMAN PHYSIOLOGY.

*Delivered in the Medical School of St. Bartholomew's Hospital,*

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GENTLEMEN,—I shall make no direct attempt this morning to interest you in the subject which I have undertaken to assist you in learning—Physiology, or to arouse in you a sense of its extreme importance. Suffice it to say, that we have to contemplate the phenomena of Life; to investigate the conditions under which we live and move and have our being. This is the subject we have to study.

But let us at the outset clearly understand, not only what we have to learn, but how we should proceed to accomplish our task. Our subject is Man—Man as a living being—the Life of Man. Now, to obtain a sound and correct idea of this, or indeed of anything, we must not confine our attention to it alone—in the abstract; but we must consider it in a relative sense—judge of it by comparison and contrast. Whoever would understand the physiology of man must study him in his relation to the world around him. Buffon, in the introduction to his work on Natural History, has well remarked:—"It is only by comparing that we can judge, and our knowledge turns entirely on the relations that things bear to those which resemble them and to those which differ from these; so if there were no animals, the nature of man would be far more incomprehensible than it is."

Even if it were desiderable and you attempted at the outset to isolate man as a subject for study, you would find your design before long frustrated by the very nature of the faculties the inquiry evoked. Could you study the blood, for instance, without the questions forcing themselves upon you—Have all living beings this most important fluid? Does it exist universally? Is it always alike?—and if there be differences, what are they? Could anyone suppress questions such as these? He were to be pitied who could. Would you not endeavour to obtain answers to such questions, and in this way to throw light, as you inevitably would, on the study of human blood? And whatever the particular subject under consideration, the result would be the same. You could not exclude such reasonable inquiries.

But it is not only in his relation to the animals around him that man must be studied. Our grasp, to be efficient, must be wider than this. He must be regarded not in relation to animals merely, whether high or low, but also in relation to the vegetable kingdom—to plants; even to the simplest forms of life: nay, farther still, in his relation to inanimate bodies—to the inorganic kingdom. Man must be considered as he stands connected with the rest of nature. In truth, a sound knowledge of human physiology implies of necessity an acquaintance with the general characters and mutual relation of animals, plants, and mineral substances. Let me again illustrate my meaning. Take, for example, the subject of Food. Suppose we have to consider, as by-and by we shall, the food of man, its nature and destination. We see at once that this food consists of various kinds of animal, vegetable, and mineral substances. Now what are the characters and purposes of each of these principal classes, containing so many and such various compounds? Are they related?—and if so, how, in what manner? Are they all necessary?—and if so, are they all equally necessary? What changes, if any, do they undergo in the system? Now, a correct answer to these and many similar questions—all important ones—involves a certain amount of knowledge at least concerning the nature of animal and vegetable tissues, and of mineral substances.

The method of studying man by comparison—interpreting him through the simpler forms of life, is, as you must soon see, not only eminently advantageous, but actually indispensable. Suppose you had to learn algebra over again: would you commence by taking the most complicated equation you could find, and devoting your attention solely and exclusively to it? Suppose that your only object was to learn equations: would you even then dismiss from your consideration the primary rules? Could you learn it thus? You might possibly, with the aid of a good memory, and under heavy pressure, cram by rote a few formulæ into your head—in the same way, for instance, as a schoolboy is crammed with Euclid,—but which would not long remain there, and which would be utterly worthless while they did.

Or to take another subject—music. Would you begin to learn its composition by studying the masterpieces of Beethoven or Mozart? You may have been attracted to the study by such marvellous productions, but it would be a difficult pursuit indeed if you confined your attention to them alone. In fact, you could never even understand such elaborate compositions if you did not view them in relation to simpler and less ambitious works. Your senses, like those of many around you, might be charmed into ecstasy; but you could never, without knowing more, appreciate in all the fulness of their effect the power and labour of those men who could thus from sound evoke such wondrous harmony.

And if this be true and reasonable, shall we deal otherwise with our great equation, man, composed as he is of so many and such vast unknown quantities? Shall we, can we discard the evidence from below in the study of this consummate product of creative skill, so complex in construction, so harmonious in action? No, we shall never fully appreciate this last, this highest, noblest creation, if we do not listen to the lower notes and simpler strains of nature. In a word, we must know something of life in general, in order to understand even anything of the life of man. Let me draw an illustration from our subject.

Look at the human brain. What a complicated and intricate mass it is! To attempt its interpretation without such assistance appears to be, and is, a hopeless task. Yet when we look farther, and study the brain in animals, from those nearest man downwards, almost at every step in the descent some portion of the complication disappears; one difficulty after another is withdrawn, and the organ becomes more and more simple. The brain is thus dissected for us, as it were, and as we trace it up again we seem to witness its construction.

But I fancy I already hear the objection—Is this kind of information applicable? Are we justified in reasoning thus? Upon what evidence do you assert this? I reply, the evidence of Nature, everywhere and under every circumstance, so far as we are able to understand it. This is what is implied by the phrase, "unity of plan"—a common term, often ignorantly employed, yet expressive of the profoundest truths.

In the earliest dawn of science, the close relation in which man stood in his physiology to the creatures around him was fairly discerned and frequently expressed, although the nature of that relation was by no means clearly understood. It was reserved for later times, and more especially for our generation, to disclose more plainly, yet still in a small portion only of its beauty, this grand feature in the scheme of creation; to appreciate far more fully than heretofore this comprehensive unity of plan; to establish upon evidence, if not complete, at least conclusive and incontrovertible, not only the relation of animals to each other generally, but also of their various parts, organs, structures, and functions; and this, too, where, for various special purposes, the common plan becomes extremely modified and so obscured.

In what sense, then, should the familiar phrase, "unity of plan," be employed? What should be understood by it?

We can recognise and compare like parts in the structure of the arm of a man, the foreleg of a quadruped, the paddle of a dolphin, the wing of a bat or of a bird, the foreleg of a reptile, and the pectoral fin of a fish, because they are constructed upon a common plan or pattern and contain homologous parts, although in the various cases adapted to distinct and widely different uses.

But although we can compare the wing of a bat or a bird with the wing of an insect functionally, inasmuch as they are adapted to analogous uses, we cannot compare them in their structure. They are not constructed out of the same anatomical elements. They do not contain like parts. They are not homologous.

Hence arise types. The animal kingdom—and, by the way, the vegetable kingdom also—is thus separated into groups or sub-kingdoms, all the members of each division being constructed according to a common type, plan, or pattern, and consequently presenting—although under widely different aspects—homologous parts.

But it by no means follows that the same anatomical elements do not occur in creatures constructed according to different types. On the contrary, type refers to the relative position of parts—to the mode in which the organs of the body are united together, although it is often manifested in the conformation of the organs themselves.

Now it will be observed that it is one thing to establish the existence of distinct types or plans of construction—certain unities of composition of parts; but it is another thing to determine what these types are, the number of distinct types according to which the animal kingdom is constructed, and, still further, the particular type to which any given individual belongs. But this is clear: that inasmuch as a type implies a distinct arrangement of parts, it must be, on that very account, opposed more or less to all others. And the very fact that any being is constructed after one type, implies an absence of conformity to any other type.

But nothing is more remarkable than the infinite diversity of structure and function exhibited by living beings.

In a general survey of the animal kingdom, nothing is more obvious than the various degrees of complexity exhibited in the structures and functions of its different members. Every gradation occurs, from forms of life so simple as to be absolutely structureless to the keenest scrutiny to others the intricacy of whose structure baffles dissection. And this diversity, be it observed, is altogether independent of type, being exhibited to the full amongst animals which belong to a common type.

The difference in the two cases between the simplest and the most elaborate or complex being consists in this—that the functions of the former, such as they are, are performed in common by the general structure, whereas in the latter each function is performed by a special instrument or structure, and is more or less limited to it. In this way a more complete result is attained.

Now this difference of complexity which different animals exhibit is well expressed by the phrase—grades of development. The simpler the construction of the whole animal, the lower is the grade of its development: the greater the variety of its organs and functions, the more elaborate the structure, the more complex the phenomena of life, so much the higher is the grade of its development.

It is necessary, however, to distinguish here variety from number of parts. Any structure or organ may be many times repeated, but mere multiplication of similar parts performing the same function does not imply any ascent in the grade of development. But the grade of development is higher as different organs with special functions are evolved. For example, a centipede does not exhibit a higher grade of development than a man because its limbs are far more numerous. In the great number of its legs we see only the repetition of similar parts adapted to the same function; they do not vary and discharge different functions like the arms and legs of man.

You have probably heard of what is called the principle of division of labour. It simply means this—that where any given result can be produced only through the influence of many different processes, these processes must necessarily be carried on by different agencies. In plainer language, when the work to be done is various, different portions of it must be entrusted to distinct workmen. I say *must* be—that is, if it is to be efficiently performed and the result perfect. And the more various the processes, the more elaborate the result, the further must be carried this subdivision of labour. Now this great principle seems to be of universal application. It holds good in nature; it holds good in the arts and manufactures. Let us consider the second case first, for it will furnish the more readily-apprehended illustration. Take any ordinary article—say a pin or a needle, as amongst the simplest—and trace its manufacture from the commencement to the conclusion. See through what different processes it passes, and how each of these is entrusted to different workmen. How much more rapidly produced and perfect the result is than if the whole had been carried on by a single labourer! It might all be accomplished by one hand, but at what sacrifice of time and excellence! Take any elaborate instrument—a watch—and the illustration is much more striking. In fact, in proportion to the elaboration of the instrument or machine, so must the number of hands employed in its construction be multiplied.

Milne Edwards happily expounds this principle thus:—"In the earliest dawn of society, each man has to minister directly to a number of wants by which he is incessantly assailed, and his energy, however great it may be, hardly suffices to obtain for him a mean and obscure existence. Amongst people where civilization has advanced, each member of the great association executes only a very small portion of a long series of works which together are necessary to his well-being, and he relies upon the activity of others to obtain in exchange for the superfluous products of his special industry the objects which he wants, and which are prepared for him by the hands of his neighbours. All improves then. Substances become more abundant. A thousand products of luxury are created, and satisfy at once new wants. The culture of the mind is improved, and intelligence advances. At last the genius of a small number developes itself, and is exercised for the profit of the masses. The division of labour, carried to its extreme limit, renders, it is true, more cramped and less brilliant the sphere of activity which occupies the majority of the labourers; but each workman, called on to repeat, without ceasing, the same movements, or to meditate upon the same order of facts, becomes, from that alone, more able to fulfil his task, and, by the judicious co-ordination of the efforts of all, the value of the total of the products increases with a rapidity which astonishes the imagination."

As in the productions of art, so in the works of nature, we recognise the same great principle of division of labour. To use the expression of Von Baer, in his masterly exposition of it, "From the most general forms the less general are developed, and so on until finally the most special arises;" or, "A heterogeneous or special structure arises out of one more homogeneous or general, and this by a gradual change."

Thus, as we pass from what we term the lowest to the highest living beings, or from the commencement to the climax of development of any one of them, we trace the gradual evolution of special parts out of the general structure. We have no right to say, from the lowest to the highest; but we may truly say, though with less assumption and complacency, from the simplest to the most complex—from the general to the special. Thus, to take a broad illustration: see in man—in ourselves—to what an extent this principle of division of labour is carried out. Our blood moves, and there is a special instrument or organ, the heart, to propel it. We breathe, and there are special instruments, the lungs, for the purpose. We digest food, and by what a complicated apparatus, with many special parts, is this function performed!—a fluid to dissolve this kind of food; another to dissolve that; a grinding apparatus to reduce it; a muscular apparatus to transmit it, and so on. But now pass to the other extreme of animal life, and look at the common sea-flower or anemone. There is a nutritive fluid—its blood, and this moves; but there is no heart. It breathes; but there are no lungs. It digests food; but the whole apparatus is a simple sac. But you will say, How are all these functions accomplished without organs for the purpose? A pertinent question truly. There are organs; but not special ones. The fluid is moved by the general contraction of the body, which is muscular. Respiration is performed at every part of the surface wherever sea-water can penetrate. Thus, in the common cavity, digestion and respiration simultaneously proceed; and by its contraction the fluid is propelled hither and thither. Nay, in the very simplest forms every portion of the living mass appears to be equally adapted to all the functions which they possess. Every portion of the homogeneous substance of the Amœba appears to discharge in common the functions of digestion, absorption, aëration, contractility, and reproduction. Thus no one part appears to be adapted to a single or special purpose, as in the most complex forms; but each, in common with the rest, assists in the discharge of several functions. But the result of this general arrangement is, if we may dare to say so, comparative imperfection, or, better, comparative incompletion. Each function, in such a case, is less completely performed, although, of course, perfectly adapted to the particular instance.

Thus, then, just as in a primitive state of society several distinct occupations fall to the lot of one man, and are then to a corresponding degree rudely performed, while as civilization advances, excellence is attained by division of labour, so in the earliest and simplest forms of life, rudimentary functions are discharged by the general structure, while as we advance onward we recognise division of labour as the principle of progress; special organs gradually evolved for special functions, complexity arising out of simplicity, and the result becoming correspondingly complete.

But note now that just as in society, so in nature, division of labour by no means implies individual independence. No person or organ, however distinct and special may be the duty discharged by him, or the function assigned to it, is independent of those around, or can exist without their help and co-operation, inasmuch as while each contributes his share to the general result, each lacks that which the others supply. In

fact, the greater the extent to which division of labour is carried out, the more special the function assigned to each organ, so—and for that very reason—the greater is the degree of their mutual dependence.

Thus, then, in a general survey of the animal kingdom we recognise a vast difference in the grade of development of its various members. Independently of types, we find the utmost diversity in the elaboration and specialization—or, to use a modern phrase, differentiation—of structures and functions; in a word, in the variety of organs and the consequent complexity of the animal. Nay more, within each type we find great extremes in the grade of development, a fact which at once shows the impossibility of arranging the members of the animal kingdom in a simple, consecutive, and inclusive series, an idea which has been for some time abandoned, but which existed long enough to produce such theories as those of "arrest of development" and "retrograde metamorphosis."

Therefore, in the study of any living being, these two great questions present themselves: its type of organization; its grade of development. They are absolutely distinct, and must be clearly distinguished. This has been long since forcibly laid down by the philosophic Von Baer. He has admirably shown that neither its type of organization nor its grade of development alone suffices to characterize any living being; for under the same type very different grades of development are presented, whilst conversely a like grade of development may be attained under different types. The type and the grade together determine the special form. And this applies not only to the entire plant or animal, but to each system and organ; for it is not more possible to follow any through one uninterrupted progression, than it is to arrange either kingdom in a single linear series.

The whole matter may be epitomized thus:—

The PLAN of development—from the general to the special.

The TYPE—the *direction* which development takes.

The GRADE—the *degree* to which development proceeds.

But in the midst of all the vast variety hence ensuing, is there nothing in common, save in the earliest germ? Is there no unity of organization beyond this? Yes, assuredly. Beneath all complexity and diversity we can discover a fundamental unity of structure—a unity of plan in the means by which the essential portion of the several functions is performed. Wherever you find certain functions discharged at all, you find them discharged everywhere in a similar manner and by structures essentially the same; although, in consequence of the extent to which the essential parts of organs become veiled and obscured in the course of their development and adaptation to special purposes by the introduction of accessory parts, this fundamental unity of plan is more generally obvious in the end or result—that is, in the function,—than the essential means—the structure.

It may be laid down, that throughout the whole animated creation the essential characters of the organs and functions which all possess in common are everywhere the same, although they are, under different circumstances, infinitely modified and varied. Thus there is unity in the essential characters of organs, and in the essential nature of their functions, wherever they are found. As in chemistry there are compounds innumerable, exhibiting all degrees of complexity, yet in their construction conformable to certain types, and composed of the same essential elements; so amidst the multitudinous products of types of organization and grades of development, we recognise organs and functions which in their essential nature are throughout the same.

It will be my purpose to develop hereafter, so far as I am able, these grand principles: to trace the functions from their earliest and simplest to their most advanced and elaborate condition, and to endeavour to demonstrate that, while the history of each is one of gradually increasing complexity—while completeness of execution is attained by division of labour—nevertheless the essential nature of each, and the means by which it is performed, remain throughout the same. For this is of the first and highest importance to the physiologist. If it were not for this identity of structure and function throughout, amidst divers types and grades innumerable, no sound or secure conclusion could be drawn from comparative research. As it is, these endless varieties and modifications are but different aspects and illustrations of the selfsame thing. Thus by comparative research is the best and largest insight gained of human physiology.

I cannot, I need not, now enter farther upon this subject—so beautiful, so fascinating—in which absolutely so much, comparatively so little, is known. It is enough for the present to have called your attention to it. I repeat, it is of surpassing importance to us; for upon this basis are constructed the largest and grandest truths of physiology, and some of the most difficult problems have been solved by the evidence which comparative physiology affords. In fact, any conclusion which will not stand the test of this inquiry is of no value, and falls to the ground.

*(To be concluded.)*

# Clinical Lecture
# ON LITHOTOMY.

*Delivered at St. Thomas's Hospital,*

BY SAMUEL SOLLY, ESQ., F.R.S.,
SURGEON TO THE HOSPITAL.

GENTLEMEN,—Since I last addressed you on the subject of stone in the bladder I have had many cases of lithotomy, and some of them of great interest. I will now continue my list of successful and unsuccessful cases from 1855. My list up to that time was published in vol. i. of THE LANCET for 1855. At that period I had operated on twenty-seven male patients, and had had five deaths.

I have now (Dec. 1861) operated on fifty-four male patients, and have had thirteen deaths. I have operated on three females, and no deaths; making fifty-seven cases and thirteen deaths, or forty-four successful cases. I have never picked my cases, but I have taken them as they were presented both in private and hospital practice. I am well aware that by so doing my fatal list is much larger than it would have been if I had selected my cases; but, on the other hand, I have every reason to believe that I have saved lives which must have been sacrificed without the operation. One of my successful cases, at the West Herts Infirmary, had been rejected at two hospitals—one a provincial, the other a London.

The instruments which I continue to use are the beak knife (a modification of Tom Blizard's), and Key's knife; the latter I frequently use for children; the beak or probe-pointed knife in the adult. I prefer the knife with a blunt or probe end to the beak, as I think it slips more readily along the groove of the staff. I once used the gorget, but it was in consequence of my knife breaking. I do not see the objections to the gorget which have been frequently urged against it. Nevertheless, I have no disposition to change my instruments now.

I will detail the cases I have had since 1855 by numbers, as, for reasons that can be understood, I do not wish the private cases to be identified with the peculiar moral circumstances which in some instances appeared to be the direct cause of a fatal result.

No. 28 was a lad nineteen years of age, a London [illegible]nic. He had had obscure symptoms of stone from his earl[illegible]ol-lection—i. e., from his fifth year. But the stone was actually detected by a surgeon five years ago, and the reason given for postponing the operation was that the friends could not afford the expense. At last his sufferings became so frightful that he sought refuge in this the ancient Hospitium of St. Mary Overie (now called St. Thomas's Hospital). He was in the hospital for some little time before we could strike the stone with the sound. The operation was performed in the usual way with the probe-pointed knife. There was some little difficulty in finding the stone, for it was small, though spiked;

and these spikes account both for his sufferings and the ulceration discovered in the mucous membrane after death, which occurred twenty-three days after the operation, from abscess in the pelvis.

No. 29.—A healthy agricultural labourer, aged forty-one. A large, flat stone. The patient got [illegible] in about a month without a bad symptom.

No. 30.—An old man, aged sixty-one. In this instance I had crushed the stone with the lithotrite about three months previous to the operation for lithotomy. He got such immediate relief from the first three operations with the lithotrite that he positively refused to have it again introduced. Now, I need not, perhaps, tell you that it is impossible to crush a large stone at one or even three *séances* into such complete dust as to allow of its being voided by the urethra. Indeed, your success as a lithotritic operator will depend on your not attempting too much at one time. Let the bladder rest between your successive operations, and you will avoid much of the danger of inflammation. In this case my patient was an ignorant agricultural labourer, and no arguments I could use to permit me to repeat the operation had the slighest influence on him. He left the West Herts Infirmary worse than he entered it, for he had, I should think, five or six stones instead of one, though he thought himself cured. After remaining out of the hospital about two months, he came back in a most distressing state, and entreated me to cut him. Knowing, of course, that this alone offered the slightest chance for his life, I did so, but only to add another to the fatal column in the list of operations. Many large pieces of lithic acid calculus, and a small perfect one about the size of a bean, were removed from his bladder. For the first four days he progressed favourably. On the fifth day he began to flag; but he lived fourteen days, dying from pyæmia and the resulting pneumonia. There was pus in the kidney; but the bladder was healthy.

No. 31 was an old but hearty man, aged seventy. He recovered without a bad symptom, and is, I believe, still alive—more than six years after the operation.

No. 32.—A boy, six years of age; successful.

No. 33.—Also a boy, only four years old; small stone; successful. This case was watched, as well as many others, by my friend Mr. Sutcliff, late house-surgeon at the West Herts Infirmary, but now practising at Ripley. To his judicious after-treatment, and careful nursing night and day, I attribute my almost uniform success in that hospital. I will quote part of his report in the last case, as it illustrates one of the difficulties which occasionally arise after an operation, and which, if not met at once in a proper way, will in all probability set up peritonitis. "I was called up at six A.M., and found that the patient had lost some blood, but as his bowels had acted in the bed it was impossible to say how much. He was very sick, but had passed plenty of urine during the night.—Ten A.M.: Very restless; cannot be kept on his back; continually pulling his penis about, and poking his fingers into the wound; bladder becoming distended; passes some urine by the urethra, but with pain—none by the wound. I now passed my finger through the wound into the bladder, after which he very soon expelled, with considerable force, a large smooth clot of blood and a great quantity of urine; the clot weighing more than an ounce, and moulded to the shape of a small contracted bladder. —Eleven P.M.: Quite comfortable; takes his food well. Urine passes freely by the wound; no pain on pressure over the bladder."

*(To be continued.)*

## ILLUSTRATIONS OF CLINICAL MIDWIFERY.

By ROBERT BARNES, M.D., F.R.C.P.,
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CASE.—*Albuminuria at seventh month of pregnancy; convulsions; labour induced by dilatation; delivery completed in two hours; recovery.*

The following case exhibits in a striking manner the remarkable power of bringing gestation to a close which we possess in the operation of dilating the cervix uteri by means of fluid pressure:—

6th November, 1861.—My assistance was requested by Dr. Tidy, of Hackney, in the treatment of a case of convulsions. The patient was a young woman, the wife of a butcher, and had, till her present illness, enjoyed good health. She married in March, and was believed by her friends to be in the seventh month of her first pregnancy. Some weeks ago slight swelling, impeding the free use of her hands, was observed; but there was nothing distressing until the 3rd instant. Since this date anasarca has become rapidly general and considerable. On the 5th, having complained of blindness, she was seized with eclampsia, and remained more or less comatose. Dr. Tidy bled her to ten ounces. The effect of this bleeding was very satisfactory. There were no fits after eight A.M. of the 6th, but she lay comatose, though not always profoundly so. The bowels were freely relieved by a purge. I saw her at half-past five P.M. of the 6th. She was semi-comatose; did not answer questions; the pupils could not be observed, owing to the strength with which she clenched the eyelids when touched; pulse 100; tosses about; face, neck, and hands much swollen; face cyanosed. Urine had been freely passed in bed. Blood drawn yesterday shows a large, loose, red clot, not buffed. The os uteri was not at all open, but admitted tip of finger on pressure; it was reached with difficulty. The persistent coma, which had already lasted more than twenty-four hours without signs of remitting, determined us to deliver. The membranes were punctured with a knitting-needle; a little liquor amnii escaped; the head presented. The patient was left for two hours, to allow the uterus to contract and prepare for expansion of the cervix. At eight P.M. we met again. A pint of urine was drawn off. The os was but slightly open; there was no indication of labour, and the patient's general condition was not more promising. I applied a caoutchouc dilator, distending it with water, in the first place, to the vagina, so as to remove all obstructive rigidity in this part of the parturient canal. The vagina was quickly expanded, giving more freedom for further manipulation, and slightly opening the os externum uteri. I then applied a dilator mounted on a flexible metallic stem inside the cavity of the cervix; by gradual distension during thirty minutes a considerable expansion had been gained; three fingers could be introduced, and feeble labour-action was excited. She was given thirty minutes more to allow this action to work. At nine P.M. the os uteri was a little more dilated; but the pains were so feeble that there seemed no certainty of delivery being effected spontaneously for many hours. I therefore sought to deliver by bimanual version; but owing to the great length of the cervix and of the uterus proper, which was a rigid cylinder, the absence of liquor amnii, and the tonic contraction of the uterus, I did not succeed readily. A loop of cord came down before the head; it was pulseless. The head was perforated at once, and forty minutes were spent in careful extraction by the crotchet, the bones affording but slender hold. The uterus contracted well, and cast the placenta. Chloroform was administered during the operation for the purpose of securing the quiescence of the patient.

On the 13th November I learned that consciousness quickly returned after the delivery; the anasarca soon disappeared, and the patient did well.

The urine drawn by catheter was acid, turbid, loaded with albumen, specific gravity 1024; it contained 1·66 grains of urea in 100 grains. After standing forty-eight hours it yielded abundant crystals of uric acid, and numerous sporules and strings of sugar fungus.

*Commentary.* — The interest of this case consists in the rapidity, certainty, and safety with which labour was induced and completed. Under the ordinary methods, delivery could not have been counted upon in less than twelve hours, if even so soon. Coma would have persisted, eclampsia would almost certainly have returned, and death would probably have supervened whilst delivery was being expected. By the method adopted, in two hours, security was attained for the mother, relief from anxiety by the friends, and for the medical attendants there was the pleasing consciousness of having triumphed over a formidable disease. I know of no obstetric operation more certain or more successful. It is a saving operation in some of the most appalling and imminent emergencies in midwifery. It obviates the loss of time, where the loss of minutes is the loss of life.

Finsbury-square, December, 1861.

## CLINICAL REMARKS ON THE CURE OF PHTHISIS.

*Delivered at St. Thomas's Hospital,*

By WILLIAM BRINTON, M.D.,
PHYSICIAN TO THE HOSPITAL.

THE case we are about to discharge (29, Ann's ward) is of the greatest interest, not so much for the rarity of its symptoms as from the remarkable success which has attended its treatment.

E. W——, aged twenty-eight, a married woman without children, had suffered five or six winters from increasingly severe weakness, and from cough, which subsided (without disappearing) during the summer, and which for the last twelve months had been associated with severe pain through the middle of the chest, and frequent (but remittent) stabbing pain under the right breast. On the 17th of July last she was seized with shivering and acute headache; to which, a fortnight later, were added intense and frequent vomiting and purging. At her admission, the vomiting followed all ingestion of food; the purging amounted to about six or eight watery stools daily, preceded by griping, accompanied by tenesmus, and streaked with blood. The pain in the belly left a superficial tenderness between the throes of vomiting and purging. The tongue was raw-looking, almost hectic. She had night-sweats. The pulse and breathing were 120 and 32 a minute respectively. The chest revealed to a careful physical examination unmistakable signs of diffuse tubercular deposits in the upper parts of both lungs, with dry pleurisy in the right mammary region, and a small cavity or cavities in the right apex. The sputum, characteristic but not copious, confirmed these signs; and yielded, to microscopic examination, plenty of the yellow elastic fibres of the lung-tissue. She was terribly prostrate, and thin; and, according to her own account, had been losing flesh for two or three years past, latterly with great rapidity.

There is little need to dwell on the diagnosis. Even the prevalence of English cholera at the time of her admission would have allowed no one who took the trouble to extract her history little by little from her broken and exhausted statements, to overlook the true nature of the intestinal malady. The case was obviously one of tubercle, deposited not only in the lungs, but in the bowels; and, in both organs, probably advanced to the stage of softening and ulceration. In the lungs, indeed, this was evident. In the bowels also, the peculiar character of the symptoms left no reasonable doubt that the solitary and agminate follicles were already ulcerated.

To-day (November 29th) she is discharged, having been kept in the hospital many weeks beyond what might have seemed necessary, in order both to certify her cure and ward off a relapse. She is, as you see, a plump, happy-looking person, very unlike an hospital patient. For the last two months, indeed, we have verified that she has been gaining flesh at the rate of about twelve pounds a month.

And now, if you ask what is the treatment which has resulted in this fortunate issue, I can only answer, that she has taken no new drug, no fancied specific, has not been kept on the verge of intoxication by alcohol, or narcotism by opium. The remedies have been of the most ordinary description. Nor can I claim anything but common sense for their direction and combination, or for the diet which alone has rendered them efficacious.

Obviously the first thing to be done was to check the dysenteric flux, and allay its symptoms. And here I should say, it is not advisable to be daunted in the use of opiates and astringents (and especially of those which reach the affected segments of the canal) by the mere presence of vomiting. Any sufficient irritation of any part of the alimentary canal may produce this symptom. And tubercle in the lungs is an independent, and equally sufficient, cause for its occurrence.

She took a mixture of bismuth, compound kino powder, and tincture of catechu, with mucilage and water, every four hours: and, as this did not seem at once to suffice, had an enema of the same composition once or twice in the first two or three days after her admission. Four ounces of brandy with cold water, and a cold semi-liquid farinaceous food, gradually supplemented by increasing quantities of milk, both food and stimulant given in twelve small daily doses, formed her diet. Hot bottles were applied to the extremities, and hot fomentations to the abdomen.

In the course of the first thirty-six hours of this treatment, she began to amend. In five or six days the vomiting had all but ceased, being limited to a little retching in the morning; and the stools, now painless and quiet, had subsided to about three a day. The mixture was now gradually exchanged for a pill of the extracts of opium and rhatany, three or four times daily; and the nausea was controlled by the compound columba mixture which I so frequently use for this purpose. By-and-by, quina was slid into the pill, its opium gradually diminished, and iron as gradually added. Long before she had thus lapsed into a purely tonic treatment, she had very reluctantly begun taking cod-liver oil, with none but the ordinary precautions as to its moderate quantity, and its admixture with the other articles of food by being taken upon a meal. During the same time her diet had also been marching steadily onward passing through strong beef-tea to meat, butter, bread, vegetables; and through good red wine (Roussillon) to stout. The chest symptoms, which were at once relieved by the treatment first adopted, continued some weeks after the diarrhœa had subsided to one stool daily, and can only be said to have disappeared under the cod-liver oil. It is now many weeks that she has been anxious to leave the hospital, feeling, as she says, quite well. And as she seems to have regained (and indeed surpassed) the *maximum* of fleshiness natural to her, and has not increased notably in weight for a fortnight past, I have no longer any excuse for keeping her here, beyond the wish which every conscientious physician must feel specially to watch the permanence of the more remarkable cures effected by our art.

The only comments one can offer upon this treatment are trite enough. Ever since the days of Æsop, and very likely before them, "*the belly and the members*" have been liable to little differences of opinion. And this proposition especially holds good in disease; where, to vary the venerable fable alluded to, the constitution is often in urgent need of the very things (diet and drugs) which the alimentary canal is outraged by being called upon to receive and elaborate. But this obstinate, irritable organ is easily circumvented by gentleness and kindness. With care in selecting, and slowness in modifying, the natural or unnatural ingesta which we have to give, the patient who to-day is vomiting every spoonful of food, may, in three weeks, be taking an ounce and a half of cod-liver oil daily, as a supplement to a rich and copious diet and half a pint or a pint of wine; and disposing of quinine and iron in full doses. For such tonics, and in such cases as this, the solid or pill form is all-important. It is often still more important not to interrupt the temporary constipation for which Nature, with all the enthusiasm of a convert, often exchanges the previous diarrhœa. Remember that even supposing the wearied intestine does not make up for its overwork by a little repose, it takes three or four days to *fill* an empty bowel, and thus to begin the natural evacuations.

Brook-street, Grosvenor-square, Dec. 1861.

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# A Mirror

## OF THE PRACTICE OF

# MEDICINE AND SURGERY

## IN THE

# HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.*, lib. 14. Proœmium.

## ST. GEORGE'S HOSPITAL.

### ENORMOUS CALCULUS FILLING THE ENTIRE BLADDER, REMOVED PIECEMEAL BY THE MEDIAN OPERATION AND A MODIFICATION OF THE BILATERAL METHOD.

(Under the care of Mr. HENRY LEE.)

ON the 19th ult., we were present when the operation of lithotomy was performed under unusual and somewhat peculiar circumstances. We give a mere outline of the case, reserving a fuller account for a future occasion.

A man, aged about thirty-four, was admitted with symptoms of stone in the bladder of but two months' duration; indeed, he had not complained before that time, although he had previously passed a substance like mortar in his urine, and also gravel. He applied for relief because he could not retain his urine, which kept dribbling away from him. Mr. Lee suspected there might be a stone in the urethra, which was subsequently confirmed; a calculus, of apparently large size, was also found in the bladder; and there was the additional complication of extreme prolapsus of the rectum.

He was accordingly submitted to the median or Allarton's operation under chloroform. On reaching the bladder, it was found to be entirely filled by a truly enormous calculus, which it was utterly impossible to lay hold of by a pair of ordinary forceps. Mr. Lee, with a curved, probe-pointed bistoury, cut into the prostate on either side to enlarge the opening, and thus converted his operation into the bilateral. With the addi-

tional room thus afforded, he was enabled to break the layers of the stone with large forceps until he reached the nucleus. The latter was circular and flattened, about an inch and a half in diameter, and hard. The various fragments were withdrawn by means of forceps and scoop, yet it was found that the stone for the greater part of its extent was adherent to the mucous membrane of the bladder, and some of the mortar-like substance no doubt projected into the urethra. The operation necessarily was tedious and protracted, and much complicated by the prolapsus of the bowel. Mr. Lee observed that he had hardly anticipated finding such a large stone, from the few symptoms complained of; but on first passing his finger into the bladder, he at once saw the formidable nature of the case he had to deal with.

Mr. Prescott Hewett took advantage of the occasion to refer to a case of stone in the bladder which occurred in his private practice some years ago, where the symptoms had been present only a few months, as in Mr. Lee's patient; and on attempting to remove the calculus by lithotomy, the patient sank from venous hæmorrhage. He made the post-mortem examination, and found that the stone, which filled the expanded bladder, could not be passed at the outlet of the pelvis, between the ischii, from its large size; he had to remove it above the pubis. It was so hard that it was difficult to break it. A model of it is preserved in the museum of the hospital.

## ST. BARTHOLOMEW'S HOSPITAL.

### ALBUMINURIA AND ANASARCA IN A PREGNANT WOMAN; RECOVERY AFTER THE BIRTH OF THE CHILD.

(Under the care of Dr. F. FARRE.)

A YOUNG married woman, Emily M——, aged twenty-one years, a domestic servant, was admitted Oct. 9th, 1861, with ascites and general anasarca. She was confined two weeks before her admission, but nine weeks ago she caught a cold and experienced pain in the loins, which was immediately followed by general dropsy. In this condition she gave birth to a child. This was her first attack of albuminuria; the urine was highly albuminous, and was plentiful in quantity; specific gravity 1021. Under treatment in hospital, it became alkaline by the 19th, although depositing albumen by heat and nitric acid; and its flow was still copious. The ascites was, however, very great; but otherwise she was much improved. By the middle of November, under the use of the common senna draught, which seemed to answer better than any other purgative, the dropsy had disappeared, and a little albumen was noticed in the urine; she was still pale. Shortly after this she left the hospital, tolerably well. We record the case to show that a severe attack of albuminuria in a pregnant woman was not followed by any untoward circumstances in giving birth to the child.

## WEST LONDON HOSPITAL.

### SUCCESSFUL TREATMENT OF SEVERE STRICTURE BY CONTINUOUS DILATATION.

(Under the care of Mr. ERNEST HART.)

THE modern introduction of methods of internal division of stricture by Civiale, and the various other operations for splitting up the stricture or otherwise dividing it, have been much recommended, and successfully employed of late, by several hospital surgeons in lieu of ordinary dilatation. They have the advantage of comparative expeditious operation, and their novelty gives them interest. The perfect success of less ambitious and adventurous methods of treatment deserves, however, to be borne in mind in certain cases.

In the case of two patients recently admitted together into the above hospital, under the care of Mr. Ernest Hart, with retention of urine, due to long-standing strictures much contracted, the contraction of the urethra was overcome, and the passage fully dilated within nine days, by continuously retaining a catheter once passed.

The first case was of four years' standing, and the patient had several times been the subject of retention. With great difficulty a No. 1 catheter was introduced. The surface of the urethra was rough, and there was a false passage, which had been made a few hours before admission. Sedative medical treatment was employed, and the catheter retained permanently in the passage. It was withdrawn after thirty hours, being then very loosely held in the urethra. A No. 3 catheter was then easily introduced, and similarly retained *in situ*; and on the ninth day the patient left the hospital, passing a large stream of urine, and was made an out-patient. A No. 10 catheter was passed by Mr. Hart with facility.

The second case was one of a very similar character. This simple plan of treatment met in these cases with all the success which could have been expected from any method. Some difficulty is occasionally found in comfortably and securely retaining the catheter *in situ*. For this purpose it is customary in Edinburgh, and with many surgeons, to pass a roller round the waist and across each groin, as for bandaging the groin, and to secure the tapes of the catheter to the side pieces of the bandage.

In these cases Mr. Hart secured the tapes of the catheter by simply involving them with a strip of plaster carried circularly round the body of the penis. This plan is less troublesome in execution, and it does not in any way impede the movement of the thighs and body, which otherwise are very inconveniently restrained.

# Medical Societies.

## ROYAL MEDICAL & CHIRURGICAL SOCIETY.

TUESDAY, DEC. 31ST, 1861.

A SPECIAL meeting of the Society was held this day for the purpose of voting an address of condolence to the Queen on the loss she has recently sustained in the death of the Prince Consort. Mr. Paget, in the unavoidable absence of Dr. Babington, occupied the chair. The following address was then read by the Secretary:—

*"To the Queen's Most Excellent Majesty.*

"MOST GRACIOUS SOVEREIGN,—We, the President and Fellows of the Royal Medical and Chirurgical Society of London, venture to offer to your Majesty, our gracious Patron, the expression of our profound sorrow at the irreparable loss which your Majesty has recently sustained in the death of the Prince Consort.

"We pray that the Almighty will pour down upon your Majesty, in this hour of trial, his Holy Spirit—the never-failing source of true consolation. When time shall have mitigated the violence of grief, your Majesty will derive comfort from the remembrance of the many and great virtues which adorned his Royal Highness, and the eminent services to the country of his adoption which his sound judgment, his consummate taste, and his untiring zeal for the public good enabled him to render.

"As members of a liberal profession, we are deeply indebted to his Royal Highness for the enlightened and fostering patronage which he so constantly bestowed on the arts and sciences. We feel assured that his works have won for him a place in the hearts of all your Majesty's subjects, and will remain to future generations as lasting monuments to his memory.

"And we beseech you, Madam, to believe that, while we join with all your other subjects in heartfelt grief at your afflicting loss, we desire to offer to your Majesty the assurance of our most devoted loyalty and most fervent attachment to your Majesty's august person and throne."

(Signed and sealed.)

The CHAIRMAN announced that Sir Benjamin Brodie would move, and Dr. C. J. B. Williams second, the resolution for the adoption of the Address, and its transmission to her Majesty.

Sir BENJAMIN BRODIE, on rising, was warmly received. The venerable surgeon, though bearing marks of his advanced age, is still vigorous in mind and speech. The manner of his address was not unworthy of his best days. A few appropriate and admirably-constructed sentences, delivered in a clear and distinct tone, were listened to with most profound attention. The speaker premised his observations on the resolution by saying that he wished to express the pleasure he felt in being once more in that Society after so long an interval, and amongst those members of the profession to whom he was so much indebted, having received from them so many marks of kindness, liberality, and courtesy. He was gratified that that Society still held its high position, and that its "Transactions" were still the most important publication issued by any similar

body. Sir Benjamin then dwelt on the virtues of the late Prince Consort. He was the patron of the arts and sciences, and himself an accomplished man of the highest attainments. He (Sir Benjamin) never recollected meeting with anyone who had so great and extensive a knowledge on general subjects connected with art, literature, and science.

Dr. WILLIAMS briefly seconded the motion, which was carried unanimously.

It will be gratifying to our readers to learn, that the sight of one of the eyes of Sir Benjamin is so much improved as to enable him to write a letter, though he is not able to read for any length of time. His sight, however, is gradually increasing in power.

# Reviews and Notices of Books.

*Memoir of Baron Larrey, Surgeon-in-Chief of the Grande Armée.* From the French. pp. 256. London: Renshaw.

THIS volume is a well-merited tribute to the memory of the distinguished surgeon-in-chief of the army of the Great Napoleon. Of the many illustrious men by whom the Emperor was surrounded throughout his long career, to none was he more indebted than to the eminent surgeon who remodeled and organized his medical staff, and who, from his first campaign with the army of the Rhine, in 1792, to the fall of Napoleon in 1815, devoted the whole of his energies with most indefatigable zeal and ability to the care of the wounded and the general health of the troops under his charge.

Jean Dominique Larrey was born in 1776 at Baudéan, a village on the banks of the Adour, at the feet of the Hautes Pyrenées. On his father's death, he, at the age of thirteen, quitted his native village for Toulouse, where he studied under the direction of his uncle, Alexis Larrey, who was the surgeon-major and professor at the Hospital of Grave, and corresponding associate of the Royal Academy of Surgery at Paris. After six years' diligent application to the science of the medical profession at Toulouse, Larrey went to Paris, and was an eye-witness of the early troubles of the Revolution. At the Hôtel Dieu, under the superintendence of Surgeon Desault, he had charge of the first victims of that sad period. It was in the vast hospital of the Hôtel Dieu, and at the Hôtel Royal des Invalides, that Larrey acquired the skill and practice which enabled him, three years later, to serve with distinction in the army of the Rhine, which he joined in 1792 at Strasbourg.

Shortly afterwards he was appointed medical chief of Kellermann's division, and soon became sensible of the inconvenience and unfitness of the French ambulances of that period, which were unable to follow the rapid movements of the army. The wounded were consequently compelled to remain on the field of battle until after the combat. Larrey was so distressed at the sight of the sufferings which the soldiers endured from this cause, that he turned his attention to the best method of giving them more speedy relief. The flying ambulances invented by this talented and benevolent surgeon united strength and solidity with lightness, and were thus enabled to follow the movements of the army with the speed of flying artillery, and to bear the wounded rapidly away from the neighbourhood of the enemy, instead of leaving them to die, or to linger in agony on the battle-field. A division of the *cadre d'ambulances volantes*, as originated by Larrey, consisted of 340 men, including officers, sub-officers, and soldiers, with twelve light and four heavy carriages. The former, built on two, the latter on four wheels, with easy springs, were provided with mattresses for the wounded, whom they went to seek on the field, while the battle was raging, and whom they transported immediately to the hospitals of the first line. When Buonaparte first saw the division of the *ambulances volantes* attached to the advanced guard of the army under General Bernadotte, he ordered it to manœuvre before him with all its staff, just as if it was on the field of battle. Perceiving at once how well calculated it was for the purpose of saving human life and economizing soldiers, he said to Larrey, "Your work is one of the most happy conceptions of our age; it will suffice for your reputation."

The hospitals of Venice and Padua were next inspected by Larrey, and at the latter place he made the acquaintance of Professors Spallanzani and Scarpa. He also established a school of surgery at Milan. Soon afterwards he returned to Paris, and received orders to repair to Toulon as Surgeon-in-Chief of the expedition to Egypt. Here he collected the requisite materials, and organized the medical staff necessary for a large army, together with three divisions of his new ambulances. On the 19th of May, 1798, the expedition sailed for Malta, which place it left for Alexandria on the 18th of June. On the fall of Alexandria, Larrey's treatment of the wounded was so successful that he received from Buonaparte a valuable Damascus sabre, with the words "Aboukir and Larrey" engraved upon it, as a memorial of his services on this occasion.

The French army, in their march through the desert, encountered the same hardships as the English army, only a year later, experienced; and Larrey, like the medical chief of the English army, Sir James M'Grigor, had to contend with the plague, ophthalmia, elephantiasis, and that terrible prostration produced by the suffocating blast of the khamsyn, or wind of the desert. The professional skill of Larrey, his fertility of resource, his energy and promptness, were equally conspicuous under these trials as on the field of action, where, with an amount of skill and coolness which cannot be too much extolled, amputations were performed amid a shower of bullets.

The example of intrepidity set by Larrey to the French surgeons is characteristically displayed by his conduct in the attack made by the French on the English intrenchments at Aboukir. General Silly was wounded in the knee, and Larrey, seeing that amputation was necessary, performed the operation in three minutes under the enemy's fire. At this moment the English cavalry charged, and Larrey had scarce time to place the wounded general on his shoulders, and reach the rearguard of the French army, before the dragoons were upon them.

Upon the capitulation of Menou, Larrey returned to France, and received at Marseilles the news of his appointment as Surgeon-in-Chief of the Consular Guard. On his arrival in Paris, he was presented to Buonaparte, then First Consul, who gave him a most pleasing welcome. He then wrote his work entitled "Relations Historiques et Chirurgicales de l'Expédition de l'Armée de l'Orient," which is well worthy of comparison with that of Sir James M'Grigor, entitled "Medical Sketches of the Expedition from India to Egypt." On the institution of the order of the Legion of Honour, in 1804, Larrey received the ribbon from the Emperor, who made use of the following words: "C'est une récompense bien méritée." Shortly after, Larrey was appointed Inspector of Hospitals.

From this time Napoleon entrusted Larrey with the entire superintendence of the medical concerns of the army; and throughout the Austrian campaign, which terminated in the battle of Austerlitz, the latter made all the sanitary arrangements with his wonted promptness and forethought. The immense number of wounded in this battle (foes as well as friends) were unavoidably crowded into hospitals near Brün, and, in spite of all the precautions of Larrey, typhus fever broke out. The peace of Presburg followed, but only to change the scene and the actors, for Napoleon declared war against Prussia and Saxony, and, after a series of triumphs ending in the battle of Jena, entered Berlin. Here Larrey visited the academies and museums, and made the acquaintance of Baron von Humboldt. The battle of Eylau followed, and there Larrey's intrepid conduct earned him a higher grade in the Legion of Honour, with the name of "Eylau" embroidered on the ribbon.

So impressed was Larrey with the benefits to be derived from distributing the wounded after a battle, so as to prevent the danger of gangrene, putrefaction, and typhus, that he transported his patients gradually a distance of fifty-five

leagues to Inowraclow, where change of air and scene and careful nursing were attended with the happiest results.

The peace of Tilsit afforded Larrey an opportunity of visiting the Russian army and going through their hospitals, his ardour for his profession never allowing him to miss an occasion of acquiring knowledge or profiting by the experience of others.

Early in 1808 Larrey went to Spain, and served with distinction until the battle of Corunna. During this campaign he met with a new disease, an epidemic peculiar to Madrid and its environs. He subsequently wrote an interesting treatise upon the causes of this malady, and the remedies which he found most efficient. So attentive was he to his duties, and to the necessities of the English prisoners under his charge, that he neglected his own health, and contracted the contagious fever under which they were suffering, and but for the devoted care of his young pupil and relative, Augustus Larrey, would probably have died. His health was scarcely restored, after a short sojourn with his family in Paris, when his services were again required with the army in Bavaria. Under the walls of Vienna, a few days before the entry of the French, he was warmly welcomed by Napoleon. At the battle of Eslingen Marshal Lannes was desperately wounded, and amputation having been performed, he was removed by Larrey's orders to the island of Lobau. Six days subsequently fever attacked the Marshal, and after lingering two days he died. The wounded on the island of Lobau suffered severely from want of food and cooking utensils. Larrey, to prevent his patients being starved, ordered soup to be made of horse-flesh, served in the cuirasses picked up on the field of battle. The French generals whose horses were thus converted into food complained to Buonaparte of Larrey's conduct; but the Emperor was so well satisfied with Larrey's explanation of the circumstances that he created him a Baron of the Empire. The battle of Wagram taxed Larrey's exertions to the utmost, for the number of wounded was immense, and the operations to be performed required the unceasing attention of the French surgeons for days together. A pension of five thousand francs per annum was soon after conferred on Larrey, who, on the conclusion of peace, returned to Paris in December, 1809. For two years he remained in Paris with his family, in a state of comparative inaction, and availed himself of this interval of repose to arrange the various documents and scientific memoranda collected during his numerous campaigns.

In 1812 Larrey's services were again called for in the field. An army of 400,000 men was assembled for the invasion of Russia. The medical arrangements for this vast force were made by Larrey upon a proportionate scale, and at Berlin he summoned all the surgeons of the French army before him, assigned to many their places with the *ambulances volantes*, and delivered for the benefit of all a course of surgical lectures. At Smolensk, Larrey converted fifteen of the largest buildings into hospitals for the wounded. But the medical supplies and stores had been destroyed, and the want of linen, lint, and splints was severely felt. Larrey and his *confrères* gave up their own shirts and linen for the use of the wounded, and a store of archives having been discovered in one of the public buildings, paper was substituted for linen, and thick parchment for splints. Thus, Larrey's energy and zeal, humanity and skill, together with the indefatigable exertions of the French surgeons, compensated for the deficiency of supplies, and the wounded, though amounting to almost 10,000, met, as far as possible, with the relief and attention they required. Space will not permit us to follow Larrey through all the disasters of the Russian campaign, which he performed almost entirely on foot, his undaunted spirit and robust constitution enabling him to go through all the hardships to which he was exposed. The generous conduct of Larrey to the Russian wounded at Mojaisk is noticed by Thiers in his "History of the Consulate and Empire." On this occasion he not only, with his usual humanity, attended to the wounded Russians, treating friends and foes without distinction, but he supplied them with money for the purchase of such things as were necessary for their complete restoration. On the retreat of the French he commended to these Russian invalid officers the wounded amongst his own countrymen who could not be removed. At the Bérésina, Larrey crossed with the Imperial Guard, but finding that the medicines and supplies for the sick had been left on the opposite bank, he recrossed the river. No sooner was he recognised by the crowds who were hastening to the broken bridge, than the unbounded affection with which Larrey had inspired the soldiers with whom he served was conspicuously manifested. Seizing him in their arms, they carried him rapidly across the river, crying, "Let us save him who saved us!" regardless of their own safety in their anxiety to preserve an officer whose tender care they had so often experienced.

Through all the vicissitudes of Napoleon's subsequent career, when fortune and friends seemed alike to desert him, Larrey's devoted attachment to his chief was shown in the most disinterested and honourable manner. He remained with the Emperor at Fontainebleau until the day of his departure for Elba, when he entreated to be allowed to accompany him. Napoleon's reply was: "Larrey, you belong to the army; you ought to follow it; yet it is with deep regret that I separate myself from you." On the return of Napoleon from Elba, Larrey was summoned to the Tuileries, where he met with the warmest reception from the Emperor, and was at once installed in his old post as medical chief of the army.

At Waterloo, Larrey was wounded and taken prisoner by the Prussians, and sentenced to be shot; but being recognised by a surgeon-major who had attended his lectures at Berlin, he was taken before Blucher, whose son's life had been saved by Larrey when badly wounded in the Austrian campaign. In grateful recollection of his benevolent services, the Marshal set him at liberty, and granted him an escort to Brussels.

Under the Restoration, Larrey suffered the loss of his pension and rank as inspector-general of hospitals; but his intrinsic merits and professional reputation were so well known that the entire withdrawal of his pension and rank in the service could not long continue, and, in 1818, his pension was restored; and, three years later, he was appointed surgeon to the Royal Guard by Louis XVIII. The Emperor of Russia had offered him a high medical position in the Russian army; but his patriotism caused him to decline all offers of foreign service.

He visited England in 1826, and formed the acquaintance of Guthrie, Cooper, and most of the professional men of note in London. On his return, he was elected a member of the Academy of Sciences, and shortly afterwards was appointed Surgeon-in-Chief of the Hôtel des Invalides. There Larrey experienced a melancholy pleasure in meeting with many of his old comrades who had been wounded in the battles of the Republic and the Empire.

Larrey's habits had always been active, and though he had now passed the meridian of life, and his strength was somewhat impaired by the hardships he had undergone, he still retained all his mental energy. He rose at three in the morning when he commenced writing his scientific memoirs. At six he visited the hospital. Afterwards he delivered his clinical lectures, and then, perhaps, lingered amongst the veterans of Napoleon, talking over the glories of bygone days. When the ashes of Napoleon arrived from St. Helena, Larrey, who was nearly seventy years of age, followed the funeral *cortège* to the gate of the Hotel of the Invalids. Clad in his uniform of the Imperial Guard, with his head uncovered on that wintry day, the old surgeon of the Grand Army, bent with age and melancholy reflections, afforded a spectacle of the deepest interest.

In 1841, an inspection of the military hospitals in Algeria being required by the French Government, Larrey, still young in spirit, and ardent as ever in the discharge of his professional duties, offered his services to the Minister of War. Accompanied by his son, Hippolyte Larrey, he left Paris on the 15th

of May, 1642, and reached Algiers on the 23rd of the same month. The hospitals of Algiers, Oran, Philippeville, and Constantine were inspected with minute attention, and notwithstanding the great heat, the other hospitals on the coast and in the interior were likewise visited in the course of his tour. With his wonted assiduity, he collected all the documents and statistical information which might prove useful for his report to the Minister of War. The incessant fatigue and mental labour devoted to this medical inspection exhausted the strength of Larrey. He embarked for France on the 5th of July, and landed at Toulon, suffering from inflammation of the chest, the result of over-exertion during the last two months. Anxious to reach Paris, and complete the object of his mission, he disregarded both the advice of Gourand, the eminent surgeon, who exhorted him to travel slowly, and the entreaties of his son, who urged him to remain at Avignon. On reaching Lyons his illness had increased so much, that it became evident that his condition was hopeless, and on the 24th of July he expired. His body was embalmed, but the authorities at Lyons would not consent to the departure of his remains for interment at Paris until honour had been paid to his memory by a procession of the most eminent residents in that city. His funeral took place at Paris amidst a large and respectful multitude. Several celebrated men pronounced orations in his honour, in which he was unanimously depicted as the true type of a great military surgeon, conspicuous for his skill, humanity, and courage. Not long after his death, his name was engraved on the Arc de Triomphe, with the illustrious names of the warriors of the Republic and the Empire. A bronze statue by David was also erected to his memory in the Court of Honour of the Military Hospital of the Val de Grâce at Paris. He is represented in his uniform of military surgeon, with his head uncovered, pressing to his heart a manuscript. It is the will of Napoleon. Beside Larrey are his books, his instruments, and his arms. Upon a cannon near him are inscribed the names of the principal battles at which he was present. In bassi relievi, on the four sides of the pedestal, are traced four of the most glorious episodes in the life of Larrey—the Pyramids, Austerlitz, Somma Sierra, and the passage of the Bérésina.

Such, then, was the career of Jean Dominique Larrey, one of the greatest, if not the greatest of military surgeons of modern times. The profession may well be proud of such a man, and echo the sentiments of his great chief, as quoted by Las Cases in his "Memorial of St. Helena," "What a man—what a brave and worthy man is Larrey! What care was given by him to the army in Egypt and everywhere! I have conceived for him the highest esteem. If the army were to raise a column to the memory of anyone, it should be to that of Larrey. He has left in my mind the idea of a truly honest man. He is truly a worthy man, for to science he unites all the virtue of an effective philanthropist. All the wounded are of his family. The chief object of his consideration has been to exert himself in his hospital, in which he has been so successful as to entitle him to both my esteem and gratitude." Napoleon, in his will, wrote, "I bequeath to the surgeon-in-chief of the French army, Larrey, 100,000 francs. He is the most virtuous man I have ever known." The testimony borne by the Duke of Wellington to the merits of our own great medical chief, Sir James M'Grigor, may aptly be compared with Napoleon's praises of his contemporary, Baron Larrey. In the Duke's despatch of the 25th of July, 1814, he says, "I consider Mr. M'Griger one of the most able, industrious, and successful public servants I have ever met with."

When we consider the activity of Larrey's career, it is surprising that he should have found time for literary pursuits. Yet the celebrated surgeon, Dupuytren, remarked that the works of Larrey form a bond of union between the surgery of the last ages and that of the present day. The results of the experience gathered by him during a long and unparalleled range of service are ably related in his works, which will long be appreciated for their intrinsic merits, as well as for the high reputation of their author.

To a thorough knowledge of his profession Larrey added great powers of administration and organization, which were tested to the utmost in the various campaigns of Napoleon. In the formation of hospitals and the provision of necessary medical stores and attendance upon emergency, such as the eve of a battle, Larrey displayed the greatest fertility of resources; and by the example of his own indefatigable zeal and assiduity in the care of the wounded, both on the field of battle and in hospital, he infused into his own staff of medical officers a like spirit and energy.

Larrey's absolute devotion to the army and to Napoleon, his attachment to his profession, his mingled humanity and courage, combined with his spotless integrity and disinterested conduct throughout a long and active career, entitle him to a lasting place in the affections of the French nation. In the annals of the Empire his name will stand amongst the foremost rank of illustrious men who adorned the court and camp of Napoleon the Great.

In concluding our notice of the volume before us, we cannot help regretting that a little more care was not bestowed on its translation. The number of French idioms scattered throughout its pages remind us of the papers set by the Civil Service Commissioners for correction by the candidates at a competitive examination; the misspelt words and bad grammar of the examination papers being intended to try the accuracy of the competitors, as in this little volume the palpable French idioms seem calculated to try the patience of its readers, if not their skill in the reconstruction of the language employed.

## THE COMPLICATION AT MOORFIELDS.

*To the Editor of* THE LANCET.

SIR,—Your admirable article in THE LANCET of last week, on the "Complication at Moorfields," satisfactory as it was in most respects, nevertheless clearly showed that you were not fully informed of all the circumstances of the case. It is quite true that the office of surgeon to the hospital at Moorfields can only be held by a Fellow of the College of Surgeons; but there is another qualification necessary. If an assistant-surgeon be promoted, he must have served as such *five years*. Here is the law of the matter, as it is seen at p. 18 of the last report:—

"V.—Any assistant-surgeon who shall, as such, have served the hospital five years, shall, provided he be a Fellow of the College of Surgeons, become, if the committee think fit, a surgeon."

Now, here are two qualifications—the fellowship and five years' service. The two assistant-surgeons who are not Fellows have served over the five years—one of them, ten; the Fellow of the Royal College of Surgeons has only served three years. So that, in fact, neither one of the three was eligible; and to have elected a Fellow who had not served his five years would have been as illegal as to have elected an assistant-surgeon who was not a Fellow, yet who had served ten years. You see, then, that no act of grace, but only simple justice, has been done in the course adopted.

The present arrangement is certainly not open to a suspicion of jobbery. There was no pressing necessity for electing a surgeon. The hospital had its legal minimum staff; and if an increase were desirable, the committee could *legally* elect as many assistant surgeons as they pleased. But so much is clear, that if they had *legally* elected a surgeon, he must, until then, have been unconnected with the hospital.

I am, Sir, your obedient servant,

December, 1861. A GOVERNOR OF THE OPHTHALMIC HOSPITAL.

THE ECRASEUR IN ANAL FISTULA.—M. Verneuil related, at a late meeting of the Surgical Society of Paris, a case of fistula in ano, in which he used the écraseur to divide the tract and rectal tissues. The fistula ran very high up by the side of the rectum, and was blind; so that the operator was obliged to perforate the bowel. The écraseur acted very well, and the hæmorrhage, as usual, was trifling; but a large abscess formed, and the patient died a few days after the operation. The fistula, at the autopsy, was found to extend much higher than had been anticipated, reaching almost to the sacral prominence.

# THE LANCET.

LONDON: SATURDAY, JANUARY 4, 1862.


A STATEMENT has been authoritatively circulated by Mr. VOULES, Clerk of the Local Board of Health Office of Windsor, to the effect that there is no fever whatever in the town, and that "the drainage of the district (which was constructed "under the direction of the most eminent engineer in such "works) is in a most efficient state." This statement is meant to produce a satisfactory conviction of the perfect healthiness of Windsor, and, at any rate, of the entire absence of any causes of disease in the ground. It is indeed most satisfactory to receive this assurance; but it is a duty to point out certain matters in connexion with this statement which suggest further inquiry. The Clerk of the Board of Health describes eulogistically the system of drains, adding, as a sort of proof superlative, that "the main sewer is also constantly flushed by the flowing of a "large body of water from a feeder from the Thames, which "enters the sewer above the town, and passes through and "thoroughly purges it at a considerable distance below the "town." The town, he observes, had been singularly free from fever for three years.

It will be seen that the Clerk shaves very closely, since on the 26th of November, 1858, representations were made to the Lord President of the Council by Sir JAMES CLARK, Physician to the QUEEN, that typhoid fever was prevailing epidemically at Windsor, that great anxiety was excited by it, and that in his opinion inquiry ought to be made into the causes of the epidemic. The investigation was accordingly ordered. The official records of this inquiry mention that typhoid fever was epidemic in Windsor, and that it was impossible to learn, with even an approach to accuracy, how many persons had suffered from it. During the last quarter of that year twenty-six deaths from the fever had been registered in Windsor; and some more had occurred at a distance, in servants and others, who, having contracted the disease in the town, had been sent away sick by their employers. The number of attacks was estimated at four hundred—probably an over-estimate. The fever, it was noted, was prevalent amongst the upper as well as the lower classes, and did not, as it so often does, press disproportionately on the poor.* Although the Clerk of the Board of Health is content to bury quietly these ghosts of the past, we cannot help catching a glimpse of their shadowy outline now that our attention has been so painfully drawn to the sanitary history of the Royal residence.

It is quite true that the unhappy circumstance of the late Prince Consort being attacked with fatal typhoid at Windsor, and Windsor having heretofore had an ominous celebrity in connexion with epidemics of the disease, may be only a remarkable coincidence; but remarkable coincidences are rare in medicine—unless, indeed, a remarkable identity of cause exist to bring them about. Therefore we desire, before accepting the *placebo* of the local Board of Health, to proceed further in the inquiry. The statement put forth now to allay public anxiety describes the drainage as being satisfactory, and stops at that. Now, in reporting on the epidemic of which we have spoken, Mr. SIMON says:—

"As regards the causation of the disease in this particular instance, nothing was easier than to see that in Windsor generally there was extreme slovenliness as to the removal of filth. In parts of the town common nuisances abounded—offensive pigsties, unregulated slaughter-houses, heaps of unremoved refuse, or puddles of obstructed surface drainage; and where there were street inlets to sewers, stenches were loudly complained of. Though a local company was pumping reasonably good water from the Thames, three-fifths of the houses were not supplied from this source, but obtained their water from surface wells, which, sunken within a populously inhabited area, sometimes in proximity to undrained premises, and sometimes almost in contact with imperfect drains, could not but be regarded as generally objectionable, and in some instances very dangerous sources of supply."

Thus much as to a great variety of important little matters connected with the causation of fever in Windsor which are not touched upon in the reassuring circular issued. Then as to the drains themselves, let us remark that the arrangements for flushing them, and the system of pipes, on which the Clerk lays so much admiring emphasis, have always been admittedly good. The Inspecting-Engineer reported, when fever was rife, that the specific fault which affected the sewerage was one which vitiated precisely its most important relations to the dwellings of the people. Systematically it was without adequate exterior ventilation, and ventilated itself into the houses of the inhabitants, "*completely nullifying the advantages which "otherwise would have resulted from the excellent plan of works "which had been carried out.*" Now, since these, which are the main faults pointed out, are altogether passed over in this circular of the Clerk,—since the drains and flushing stream form only the basis of a good system, and existed in the main when fever was most rife,—we are bound to express the desire that some further and more satisfactory information should be given. Certainly the circular makes out no case for stopping inquiry, but, by slurring over the most vital matters, seems to add force to the suggestion for an investigation. It perhaps deserves to be remarked on this head, that this same Clerk who now calms the public mind with a general assurance that all is well at Windsor in the matter of sanitary arrangements, stated in an official letter to the Lords of the Privy Council that "the local Board of Health cannot admit "that the evils referred to have occasioned or contributed to "the epidemic which has been so general;" nevertheless promising that these evils should be removed. Perhaps the belief that these conditions are innocuous is not the most desirable faith under which to set about energetically removing them, at whatever cost or inconvenience: at any rate a wholesome conviction of their efficiency in producing fever would be a frame of mind more conducive to energy in the person of an acting official of the local Board of Health. We do not inquire whether these convictions have been altered, for there is something in the tone of Mr. VOULES' circular which discourages that belief; but we desire to ascertain whether the work so performed against the grain has been thoroughly done and properly maintained.

* Report of the Medical Officer of the Privy Council. London, 1859.

THE future site of St. Thomas's Hospital is a question of greater importance to the sick poor of this metropolis than any

other which has been recently discussed. And since the public medical succour of the poor is the great source of medical knowledge, the question is also of deep interest to science. That two propositions should have been put forward, either of which would involve alike the sacrifice of the interests of the poor and of science, must be our apology for again pleading the overwhelming arguments in favour of retaining this ancient hospital in the vicinity of its present site. As far as lies in our power, the hospital shal not be carried out of town beyond the reach of its suffering clients, or its enormous wealth absorbed for the aggrandizement of a College, whose benefits are restricted to one section of the community, in ignorance of the imperative wants and indefeasible rights of the busy thousands who throng the southern bank of the Thames.

In the first place, it must be remembered that the original foundation of St. Thomas's Hospital in 1552, in its actual site, invests the population of the south with a prescriptive right of three centuries of possession. During this time, notwithstanding the addition of Guy's Hospital in 1772, the people dependent upon it have enormously increased in number. They have indeed far outgrown the local hospital succour.

There is an old map, by ROQUE, showing the area of London built over in 1745, which, compared with other maps constructed at subsequent dates, gives an accurate idea of the growth of the population, and the consequent growth of the demand for local hospital succour. In 1745,—subsequently to the foundation of Guy's,—only a narrow strip, stretching a little way above and below London-bridge, was built upon. In 1818, this area was about doubled. In 1834, the area of 1818 was doubled; and in 1857 the inhabited area had doubled again. A dense population had stretched below Greenwich, as high as Battersea, and far to the south. Still, for a hundred years, no new hospital had been erected. The actual accommodation afforded by the Borough hospitals amounts to 1130 beds. The southern inhabited area within the boundary of the Metropolis Local Management Act is equal to 70 square miles. The population assigned by the last Census to the same area exceeded 773,000. But neither this vast area, nor this gigantic population, defines the extent of the districts or of the people who look to these 1130 beds for succour. The counties of Surrey and Kent, beyond the metropolitan boundary, send large contingents to the crowds of sick and maimed who throng the gates of the two hospitals at the foot of London-bridge.

Contrast this pressure and this disproportion of relief with the condition of the more fortunate population on the left bank of the Thames. Here we have an inhabited area of about 50 square miles, occupied by something more than 2,000,000 of souls, ministered to by twelve general hospitals, containing 2575 beds at the least.

But this rough comparison gives but an inadequate idea of the relative hospital succour of the two sides of the river. The eastern districts of London are almost isolated by position from the rest. These embrace 10 square miles, and a population of 571,129 persons, almost exclusively dependent upon the London Hospital. If this division of the metropolis be subtracted, we have an area of 40 square miles, inhabited by less than 1,500,000 persons, served by ten hospitals with 2130 beds.

And to show more strikingly with what a lavish hand Philanthropy has showered her charity upon the north, we witness the remarkable fact that nearly all the special hospitals, and an immense preponderance of minor medical institutions, as dispensaries, are scattered over this favoured area. Thus we have the German Hospital, the Lock, the Fever, the Small-pox, the Royal Ophthalmic, the Hospital for Sick Children, three Lying-in Hospitals, two more for Sick Women, one for Fistula, two for Diseases of the Chest, and one said to be specially for the cure of Stone in the Bladder. These special institutions together afford about 700 more beds to add to the 2130. We have thus 70 beds to every square mile, and one bed to every 536 inhabitants. And since the north and western districts contain a very large proportion of those who give but do not take hospital relief, it can hardly be maintained that this portion of the metropolis is insufficiently provided for.

On the other side of the river, where dwell a far larger proportion of people labouring in factories and exposed to the risks of injuries and disease, there are but 16 beds to every square mile, and one bed to 700 inhabitants.

Now, viewing these facts, it must be admitted that either the north and west of London is oppressed with a superabundance of hospital aid, or that the south is lamentably destitute. The true field for philanthropy lies, not in fostering the growth of those parasitical and hypocritical impostures, the petty special hospitals, which are only seen in suspicious contiguity to the abodes of the rich, but in helping those whose need is all the greater because it is less prominently and less pertinaciously obtruded before the public gaze.

Since—apart from the gross injustice of moving the hospital to the northern bank—an hospital in Lincoln's-inn-fields would practically be as inaccessible to the bulk of the southern population as would one fairly transplanted into the country, the statistical comparison given above offers a fatal objection to the King's College job, as well as to the suburban sanitarian fallacy.

Assuming, then, that a new hospital must be erected somewhere not far from the actual spot, the practical question to determine is a very narrow one indeed. The two great conditions to be fulfilled are—first, to secure a sufficient space; secondly, that the situation shall be readily accessible to the greatest bulk of the labouring poor who depend upon the hospital. A suggestion has sprung up, and has been largely approved amongst the medical practitioners of the district, that the Surrey Gardens combine the requisite advantages in a pro minent degree. The best consideration we can give to the subject has led to the same conclusion. Here is a site exceeding twelve acres, with a soil chiefly gravel, where the air is free and salubrious, with good facilities for drainage that will soon be improved by the construction of the southern low level main drain, and standing in the very heart of an immense system of broad roads, connecting all the metropolitan bridges, and concentrating the traffic from the southern counties. Not far is the terminus of the South-Western Railway. A mile off is the ancient site near London-bridge and the sister hospital of Guy's. Excepting the Bank itself, there is probably no focus for traffic that surpasses the Elephant and Castle. This point is half a mile distant by two roads from the Surrey Gardens. And all the main roads in the district are so wide and well planned that no obstruction ever delays the freest circulation. This is a matter of paramount importance where the object is to convey sick and maimed persons with the greatest speed and ease. To reach London-bridge, either from the City or Kennington, is a difficulty that will come home to many who have in vain sought to "catch a train." A similar difficulty

would certainly turn the scale between life and death for many a wretch who should be compelled to leave the Borough in search of an hospital in Clare-market. Where minutes make the difference between the prospect of recovery and death, it is the very depth of folly to interpose the obstacles of distance and time between the miserable sufferer and the aid he needs. What would be thought of the humanity or the courage of the Army Medical Staff who should plant their hospital in some safe and pleasant spot five or six miles away from the raging battle? Yet such is the conduct of those who would transport St. Thomas's Hospital away from that vast army of artificers who are fighting against the countless perils incident to their daily toil.

MR. GRIFFIN, the indefatigable chairman of the Poor-law Medical Reform Committee, has given us a summary of the evidence adduced before the Poor-law Medical Commission on the appointment of medical officers. Nothing could more conclusively prove the importance and justice of electing these officers for life. Under the old system they were subject to summary dismissal by a power which might be influenced by personal, tyrannical, or other equally exceptionable motives; they were at the mercy of boards of guardians; they were fettered by their position to a policy which might be most injurious to the poor; and they were obnoxious to insult and intimidation. Under the system at present in force they are enabled to do their duty faithfully and in safety, unaffected by those influences which had previously acted so disastrously on them. In justice to our brethren it must be stated that no class of men ever fought more courageously or consistently for the interests of those committed to their charge, and this, too, often at great personal sacrifice and humiliation. There is not a single valid argument in favour of the old system; whilst the conclusive testimony of Mr. BOWERING, Mr. JOHNSON, and Mr. STRETTON, in support of the present system, is unanswerable. We fervently trust that further ameliorations in the condition of Poor-law medical officers may, by the aid of that Committee over which Mr. GRIFFIN presides, be eventually effected.

# Medical Annotations.

"Ne quid nimis."

## THE SANITARY CONDITION OF WINDSOR CASTLE.

IF there be any one fact in relation to the causation of disease which may be considered to be more especially confirmed by a mass of evidence amounting to the clearest demonstration, it is that typhoid fever is commonly generated by the effluvia and putrid emanations from bad drains, old cesspools, and similar sources, or by decomposing animal matter in drinking water. We do not need now to review the array of evidence on which this conclusion is founded. It is one accepted by Dr. Farr and Mr. Simon, the official advisers of the Government in sanitary matters, and generally by those scientific physicians who have given attention to such matters. In this etiological fact is found, as Dr. Murchison has pointed out, "the explanation why typhoid fever attacks the rich as well as the poor—why it occurs in solitary houses in the country as well as in great cities—and why it should always be most prevalent in the autumn season." The number of instances in which such isolated outbursts have been traced to the defects of drainage, unsuspected accumulations of night-soil, and old cesspools, is very considerable.

Now we have already stated that the drainage of Windsor Castle is excellently devised and well cared for; nevertheless, we are informed on the highest authority, and by those best acquainted with the place, that although the royal apartments and the basement are as well ventilated as their inconvenient construction permits, yet bad smells very frequently occur there, and are a source of annoyance. This statement is repeated by the warmest apologists for the drainage, and by the optimists who are seeking to make everything superficially and dangerously smooth. Very lately a circumstance here much to the point occurred in the villa of a great city merchant. He had constructed a house and grounds perfectly drained and ventilated. Still bad smells were occasionally noticed; and although trapping and ventilation were carried to the highest pitch of perfection, typhoid fever showed itself amongst the servants, and caused much distress and alarm. An experienced sanitary officer who was finally consulted advised that the ground should be carefully probed for old cesspools; and a trained person employed found four of these fever-generators on the spot, which had been closed up when disused, but, as so often happens, had not been emptied and filled with brick-dust—the only safe method of dealing with them. This cause was removed, and the effect ceased.

Now bad smells must have a cause, and typhoid fever is intimately connected with bad smells. Here is suggestive matter for those most concerned. It is quite true that the late Prince Consort may have contracted his fever at Osborne, or South Kensington, or in any unknown locality; but he was taken ill at Windsor Castle; and we should not be satisfied by resting on vague imaginings, unless perforce driven to them. The known etiology of typhoid fever is so suggestive of a local defect in the Castle, that no one can feel happy at hearing that the Royal residents have returned until the present doubt is set at rest.

## ALLEGED POISONING OF THE LATE KING OF PORTUGAL.

THE calamitous deaths of the late King of Portugal and his Royal brother from the attacks of typhoid fever, have produced an excitement in Lisbon which may be easily understood. Recent telegrams announce that a Sanitary Commission had been nominated, which was charged with the duty of examining the sanitary condition of the Royal residences, and suggesting any necessary improvements. This was, indeed, a most fitting measure; for as the disease is one probably generated by filth, and undoubtedly fostered by defects of drainage, putrid emanations, and vitiated air, the labours of an intelligent commission would be most valuable in preventing the perpetuation of its causes. Late despatches announce that a more serious turn had occurred in public opinion; that rumours of poisoning had spread widely amongst the people, and had assumed so much consistency in their minds that they had rioted in the streets, and rushed to the druggists' shops and there destroyed all the poisonous drugs on which they could lay hands. The body of the King has been consequently exhumed and analytically examined. Without pretending to prejudge the extraordinary question thus painfully raised, it is the place to recall the fact that a similar outcry of suspected poisoning has been several times raised in cases of an isolated outbreak of typhoid fever, and that such suspicions have not proved to be correct.

The following is a striking instance. In the spring of 1857 a number of strangers came to reside at the National Hotel, Washington, in order to be present at the inauguration of Mr. Buchanan as President of the United States. A large number of them were seized with typhoid fever, including the President Elect himself. Rumours were then spread abroad that they had been poisoned. At first it was stated that

arsenic had been introduced into the food by political enemies, just as it has been believed in Lisbon that the King was poisoned by the Spaniards. Then it was suggested that the copper of the culinary utensils had poisoned the food; but a rigorous investigation proved, to the satisfaction of the medical attendants and of a committee appointed for the occasion, that the disease was due to noxious exhalations from a sewer, from which there was a direct opening into the building, through which a strong current of fetid air was very perceptible.*

Dr. Camps also communicated to the Epidemiological Society, on April 2nd, 1855, an account of a very remarkable outbreak of typhoid fever at Cowbridge, in Wales, where there was suspicion of poisoning. Two balls had been held at the hotel of this town, and had been attended by about 140 persons from all parts of the surrounding country. Shortly after, 40 of these persons were seized with fever, of whom 12 died. The fever was not prevalent at the time at Cowbridge, and it attacked only those who had attended the balls. This was quite enough to excite suspicions of poisoning. The disease was, however, typhoid fever, and the cause was discovered in the foul subterranean condition of the supper-room, which was found to be a temporarily transformed loft over an excessively ill-conditioned stable.

There are persons who will remember a similar outcry having been raised, many years ago, on the occasion of the outbreak of an epidemic in a school at Clapham, when 20 out of 22 children were seized with violent purging and illness, and some of them died. Dr. Chambers and Dr. Latham were employed to investigate this occurrence, and their inquiries showed that the poison was sewer poison, and the disease typhoid fever.

The analysis of the body of Prince João has yielded similar results; and if the people of Lisbon will listen to reason, and take this solemn lesson duly to heart, they may purify their city by proper sanitary measures from a plague which has wasted many thousand lives before claiming this illustrious prey.

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## A LAUREL FOR ENGLISH SURGEONS.

THE French Academy of Medicine has been carrying on a remarkable discussion, which is not without interest to English surgeons. The pretensions of the French school of surgery to a distinct pre-eminence have been maintained by themselves with a self-satisfaction and an apparent confidence which have always been regarded in this country with a secret and placid amusement. We are so much accustomed to the notes of the Gallic bird, which often crows upon very small heaps, that a gentle smile has been the only disclaimer which English surgeons have been wont to put in against the loud boastings of our neighbours across the Channel. Sundry anecdotes and quiet repartees of distinguished Englishmen on the subject have enjoyed a wide celebrity amongst us; but we have not thought it dignified or necessary to interfere with any other country's estimate of its peculiar surgical advancement. Occasionally French surgeons have awoke from the dream of superiority, and discovered that they were all behindhand. Then periods of imitation have set in, which have been denominated *Anglomanie*, and under this dreadful stigma those who ventured to admire the achievements of the English school have been compelled to appropriate the results silently, or perhaps to search historically for a French parentage. It is thus that Roux, having found to his astonishment early in this century that English surgeons had discovered a great method of treating aneurism, and that for the first time in the world English surgeons and their American disciples were tying with safety all the large arteries, took this intelligence with him to Paris, and dared to be an Anglomaniac in order to bring this good news to his countrymen. It was from the school of Hunter that this great surgical discovery proceeded. Nevertheless, M. Broca has lately groped about to find a Frenchman on whom he could if possible father it, and tried to make Dessault the hero of the Hunterian method. The *Anglomanie* which Roux introduced lasted long enough to familiarise French surgeons with our method of tying the arteries. This striking advance, followed by the yet greater improvement in the treatment of aneurism by pressure, and other remarkable novelties in British surgery, they have followed in France. But singularly enough, while boasting so often of standing in the foremost rank, they have just awoke to the conviction that in several most essential respects French surgery is still greatly in the rear of English. Orators in the Academy have informed their colleagues that not only are a vast number of resections of all the joints successfully practised in this country, leaving useful limbs where French surgeons remove them altogether by amputation; not only is the great operation of ovariotomy, which may be said to be unknown there, beneficially and frequently performed here; not only are the operations for prolapse of the uterus, vesico-vaginal fistulæ, and ruptures of the perinæum better understood and more successful here; but that, as a whole, English surgery is by far more efficient in that great object of the art—the saving of life. Our operations for strangulated hernia, for amputations of the upper extremity and of the thigh, for the removal of tumours—in fact, for all the everyday work, as well as the great achievements and delicate finesses of surgery, show a much larger per-centage of recoveries than do those in the French hospitals. Our hospital administration is better, our wards more cleanly and better ventilated, the air purer, the patients less crowded, the dressings employed less complicated, and the lives saved more numerous. The numbers were given in a recent letter of our Paris correspondent. The balance of human life in our favour is startling. We can afford to sacrifice a great deal of "brilliancy" to this result. The object of surgery is to save life and limb. By the greater proportion of recoveries in all the categories of surgical proceeding, we have the satisfaction to find that, by the acknowledgment of the French surgeons themselves, including those who have recently visited us to examine for themselves, and veterans as distinguished as M. Malgaigne, we are happier in operating than the members of that distinguished school; and that we pay greater attention to the saving of limbs, is manifest by the zeal with which resections and other instances of conservative surgery have been nurtured and developed in our hospitals.

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## FIRE AND LIFE.

THE uncertainty of life is something more than proverbial. It is the known central fact from which we are to proceed in regulating our lives. Sad, indeed, have been the public warnings which the last year has offered to us in notable instances of that uncertain tenure. But although the individual expectation is so little to be calculated, and no man knows what to-morrow may bring forth, yet it may be said in another sense that there are many things in the world more uncertain than life, and, perhaps, not many contingent conditions as to which so much may be predicated with certainty. Here are the actuaries and the registrars and the sanitary philosophers, who will reduce the duration of life of any number of persons to an inexorable *cadre* of figures. Here are Dr. Farr and Mr. Sylvester, who will say, Give us any number of persons—tell us their age, occupations, place of living, and we will tell you what shall be the average and what the total duration of their lives, and how much money you must give them for their expectation of life, if you want to make a moderate profit of them. Life in the mass is a wonderfully certain thing. The Registrar-General tells you how many thousand people have had their lives shortened, and by how much; and by Gomperta's law you may calculate life-expectations by *x* and *n* as you would the acres in a field, or the height of a tower. And

* Quoted from American sources in the Medico-Chirurgical Transactions, vol. xli.

Contributions to the Etiology of Continued Fever: by C. Murchison, M.D., Senior Physician to the Fever Hospital.

what is more, these calculations are marvellously correct. Life, so uncertain in the individual, is very remarkably subject to unseen and inflexible laws in the mass; so that the mathematicians easily deal with it in gross. This is singularly verified in the history of the rise and progress of insurance companies. Life is infinitely more certain than fire; and so great have been the advantages which this gives to the offices, that it appears from recent statistics that the profits of the companies on life insurance have been by far more steady and considerable than on fire insurance. Where the two have been combined, often all the profits of the company have been derived from the life department; and some ninety-three companies for insurance solely against fire have been broken up altogether.

## AN EPIDEMIC CHECKED.

A REMARKABLE proof of what may be done in removing causes of disease by careful supervision and skilled medical direction has been afforded at the Central London District School. The children at that school were, as we stated lately, suffering most extensively from defective domestic arrangements. Putting aside some minor causes of complaint, they were the subjects of an epidemic affection of the eye. Upwards of a hundred of them were so affected. Mr. Haynes Walton was called into consultation as an ophthalmologist of scientific reputation, and decided that the affection was catarrhal ophthalmia; that the dust of the courtyards and other conditions brought under review were not the causes of it, but that it was due to an injudicious method of ventilation. Over the head of each bed was a great hole, through which the air was constantly renewed; and thus each child was continually exposed, when lying in bed, to a direct draught of cold air. The result was almost universal catarrhal ophthalmia. These holes he advised to be stopped up, and other methods of ventilation introduced as a substitution. The result has been, that ophthalmia has disappeared from the school, and so completely that a recent committee have intimated a doubt whether it had ever existed. This is just one of the instances of the useful preventive functions which medical men may be called to fill; great good would result if public institutions were more thoroughly and generally supervised in this way.

## THE ILLNESS OF THE LATE PRINCE CONSORT.

As yet we have not obtained permission to furnish the medical profession with an authentic account of the illness of his late Royal Highness the Prince Consort, but we feel bound to repeat the appeal for such an authorized publication. The mass of our correspondence on this subject, and the unanimity with which the entire body of the press endorsed that appeal by copying it in their impressions, indicate sufficiently the extent to which the mind of the profession and the nation is unpleasantly affected by the injudicious reticence observed in this matter up to the present time. The only argument which has been addressed to us in favour of the abstinence from such publication is, that the nature and progress of an illness is a private matter—a confidence which the public cannot ask the physicians to surrender. If this were so here, it would certainly not be the voice of this journal which would be heard calling upon the physicians to supply such an account, however desirable it might be on public grounds: the duty would have rested with other departments of the press, and with them it should have remained. But since this illness affected a person so near to us all that we have clad ourselves in mourning for its fatal result, that we have suspended our business, and given all the outward tokens of the grief that has reigned in our hearts—so near to us that we were, so to say, summoned to the bedside of the illustrious patient by his physicians during its progress; since we were called daily and publicly to hear their opinions, to accept their statement of the character of the malady and the prognosis as to its duration; and since they thus took the whole body of Englishmen, laymen and physicians, into their confidence—no doubt under the highest sanction and command,—it cannot surely be said that the profession are disentitled to ask that the account given of the malady shall be coherent and satisfactory. Let us look at the accounts already furnished to us officially on this head. Let us put together the bulletins:—

"*Sunday, Dec. 8th.*—His Royal Highness the Prince Consort has been confined to his apartments for the last week, suffering from a feverish cold, with pains in the limbs. Within the last two days the feverish symptoms have rather increased, and are likely to continue for some time longer; but there are no unfavourable symptoms."

"*Wednesday, Dec. 11th.*—His Royal Highness the Prince Consort is suffering from fever, unattended by unfavourable symptoms, but likely from its nature to continue for some time."

"*Thursday, Dec. 12th.*—His Royal Highness the Prince Consort has passed a quiet night. The symptoms have undergone little change.—James Clark, M.D.; Henry Holland, M.D.; Thomas Watson, M.D.; William Jenner, M.D."

"*Friday, Dec. 13th.*—His Royal Highness the Prince Consort passed a restless night, and the symptoms have assumed an unfavourable character during the day.—James Clark, M.D.; Henry Holland, M.D.; Thomas Watson, M.D.; William Jenner, M.D."

"*Saturday, Dec. 14th*, 9 A.M.—His Royal Highness the Prince Consort has had a quiet night, and there is mitigation of the severity of the symptoms.—James Clark, M.D.; Henry Holland, M.D.; Thomas Watson, M.D.; William Jenner, M.D."

"*Saturday, Dec. 14th*, 4.30 P.M.—His Royal Highness the Prince Consort is in a most critical state.—James Clark, M.D.; Henry Holland, M.D.; Thomas Watson, M.D.; William Jenner, M.D."

"*Saturday Night, Dec. 14th.*—His Royal Highness the Prince Consort became rapidly weaker during the evening, and expired without suffering at ten minutes before eleven o'clock.—James Clark, M.D.; Henry Holland, M.D.; Thomas Watson, M.D.; William Jenner, M.D."

Finally, the death was certified to be "Typhoid fever: duration 21 days."

Now we will not sum up coherently these scattered documents, because in doing so we might seem to accuse the physicians, which we certainly desire not to do. But we will ask those distinguished men just to consider what effect upon the mind of the profession such a series of documents are likely to produce if unexplained. Here is an account of a disease which begins on the 8th with "feverish cold;" which on the 11th is unattended by unfavourable symptoms; and on the 14th kills, the term "typhoid fever" then first officially appearing. It would be wrong to infer that this disease, being "typhoid fever (21 days)" from the first, was mistaken for a "feverish cold" until the 11th December, or eighteenth day of the disease: but so the medical attendants seem here to represent to the world. Indeed it is clearly impossible to give a fair clinical history of a disease in five bulletins addressed to the public, and therefore necessarily drawn up in very general, if not even vague, terms. The medical attendants of the Prince, therefore, cannot have fairly represented themselves to the world in the accounts thus published. It must be remembered that during the illness of so illustrious and beloved a personage, the greatest desire prevailed to modify the language describing his malady, so as to keep clear of raising anxieties and fears that might not be justified by final events. It is in the highest degree desirable to satisfy the reasonable demands of the profession and of the public, by permitting the physicians to place upon record an authentic medical history of the fatal illness, which, as affecting a personage of national and historical interest, ought without delay to be removed from all shadow of doubt or ambiguity.

# THE INFLUENCE OF RAILWAY TRAVELLING ON PUBLIC HEALTH.

## Report of the Commission.

### I.

IN the year 1825 there was, in the whole world, only one railway carriage, built to convey passengers. It ran on the first railway between Stockton and Darlington, and bore on its panels the motto—

"Periculum privatum, publica utilitas."

The generation, which then was young, and now is old, has seen mighty changes such as it was never before given to one generation to witness. But none of these changes have been more remarkable than those which trace their origin in clear line to the ugly yellow carriage that passed almost unnoticed in the opening procession slowly dragged by the first engine along the first railway line.

Publica utilitas.

From the time of this trial trip there was no longer any question as to the public utility of the new system of travelling; and the lapse of a third of a century has proved to demonstration how aptly chosen were the words "publica utilitas," selected by George Stephenson as best describing the purpose his grand project was destined to subserve. He foresaw "the day when railways would come to supersede almost all other modes of conveyance in this country, and railroads become the great highway for the King and all his subjects." These were his own words, and the hearer of them lives to witness their exact fulfilment.

Periculum privatum.

But if there was no question as to public utility, yet the first words of the motto—that this new method of travelling was void of danger—met no such ready assent; for the most alarming conjectures were put forth as to injurious influences on public health which railway travelling must produce, and awful dangers were described as impending over rash adventurers who should thus risk their safety.

Health influence of coach travelling.

A century and a half previous to the earliest times of railway travelling, similar warnings had been uttered about a new-fangled mode of conveyance just then introduced; and stage coaches were described as "one of the greatest evils that had happened to the kingdom." The injury to health from their use was only one of many disastrous results. Those who travelled by these coaches, it was urged, became weary and listless, and contracted an idle habit of body. "What advantage is it to men's health," asks one author,* "to be called out of their beds into their coaches an hour before day in the morning, to be hurried in them from place to place till one hour, two, or three within night, after sitting all day, in the summer time stifled with heat and choked with dust, or in the winter starving and freezing with cold? What addition is it to men's health or business to ride all day with strangers, oftentimes sick, ancient, diseased persons, or young children crying; many times poisoned with their nasty scents? Is it for a man's health to be laid fast in foul ways, and forced to wade up to the knees in mire,—to travel in rotten coaches, necessitated to bait or lodge at the worst inn on the road?"—and so on until the writer had made a case sufficient to demand the immediate suppression of stage coaches. With custom and after experience the influence of coach travelling on health and comfort came to be very differently estimated. Pennant says the coaches of his time (1739) were fitted for the conveyance of "the soft inhabitants of Sybaris;" and a scientific dictionary* (1763) says, "at present they seem to want nothing either with regard to ease or magnificence." Yet some thirty years after this, when the late Lord Campbell first travelled by coach from the north to London, he was gravely advised to stay a day at York, as the rapidity of motion (eight miles per hour) had caused several through-going passengers to die of apoplexy.

Threatened dangers of railroads.

The dangers from railway travelling with which the public were at first threatened were innumerable. The immense velocity (for some rash speculators had hinted at a pace of twenty miles an hour) was fraught with danger to the respiration, and the carbonic acid generated by the fuel when passing through long tunnels would inevitably produce suffocation by "the destruction of the atmosphere."† Tunnels would expose healthy people to colds, catarrhs, and consumptions.‡ Boiling and maiming were to be every-day occurrences. And numbers of less demonstrative people looked on the suggested innovation either as a wicked tempting of Providence, or a wild scheme too visionary to be worthy of serious consideration.

Materials and purpose of present inquiry.

We have outlived the time of these prejudices. We have reached a period when loose inferences and vague surmises should no longer be permitted to usurp the place of exact knowledge. For the immense collection of facts and data already made in reference to railways, and the experience accumulated by the rapid development of railway travelling, supply materials abundantly sufficient to justify a systematic inquiry into the influence on health of railway travelling, with reasonable prospect of attaining reliable results and determining many harassing doubts.

Medical men are often asked whether they consider railway travelling prejudicial to health. Usually some case is cited on which the question is made to turn; precision as to history and symptoms being more or less disregarded. But the very frequency of the interrogation points to the same conclusion which careful inquiry has led us to form—that there has been gradually growing up in the public mind a suspicion of dangers from railway travelling widely different from that apprehension with which the thoughts of travellers were at first uneasily possessed. It is no longer the fear of accidents so much as a vague dread of certain undefined consequences to health resulting from influences peculiarly produced by this mode of travelling; and we find that those little likely to form decided opinions without careful inquiry share this feeling, and do not hesitate to express it. In his evidence before a Committee of the House of Commons in 1859, Lord Shaftesbury said, "The very power of locomotion keeps persons in a state of great nervous excitement, and it is worthy of attention to what an extent this effect prevails. I have ascertained that many persons who have been in the habit of travelling by railway have been obliged to give it up in consequence of the effect on the nervous system. I think that all these things indicate a tendency to nervous excitement, and in what it may issue I do not know." In the course of this inquiry, it is proposed to consider the evidence on which rests the prevailing public opinion very fairly represented by the remarks of this careful observer.

It is due, however, that we first mention the actual amount of railway travelling according to the latest estimates, and then consider the extent of those immediate dangers to life and limb usually grouped under the common term of railway accidents; in order that these may not interfere with sub-

* The Grand Concerne of England Explained. Harl. MSS., 1673.

* A Cyclopædia of the Arts and Sciences. By a Society of Gentlemen. 4 vols.
† Dr. Lardner. ‡ Sir A. Carlisle.

sequent considerations as to other influences of railway travelling, apart from the immediate risk of personal injury.

Present extent of railway travelling.

There are now about 11,000 miles of railway, mostly double lines, in operation in Great Britain; equivalent to the total length of all the railways in the rest of Europe, according to the last returns. The number of individual journeys undertaken in the United Kingdom have increased, during the last ten years, at the rate of nearly ten millions per annum. The distance now daily travelled by passenger-trains would circle the whole world six times. The separate journeys made during the year 1860 amounted to 164,633,028, the average length of each journey being rather more than fourteen miles.*

The time saved.

The saving of time by railway as compared with the best of other modes of conveyance is about one hour in each twelve miles. And so, in the course of a twelvemonth there is added to the available time of the community a period of upwards of 20,000 years; or, in other words, there is a number three times as great as this added to the effective working population of the country, reckoning eight hours as the work-time in each day. Certain reservations must, however, be borne in mind so far as these figures are concerned; since journeys now rendered easy by rail would never have been undertaken but for its facilities. Allowing the widest margin for this and other exceptions, there still remains a clear annual saving, which may be reckoned by hundreds of years; and this has an indirect bearing on the subject of public health which may be here alluded to.

Social changes.

For people in the present day do more work, with less recreation, or provision of rest for the mind and exercise for the body, than at any previous time. In the middle ages, the number of feasts and holidays ordered by the Church or established by custom ensured many days in the year when no business was thought of. In large towns, it was the duty of citizens to encourage and join in athletic games and exercises, for which certain hours were set apart, and which inured men to resist the influences of cold, of discomfort, and even of disease. In London, occupations of this salutary kind were solemnly enjoined, and, from the account of Stowe,† must have absorbed a considerable amount of time. In the eighteenth century, general holidays and festivals decreased in number, and public exercises were gradually discontinued. But, even then, a journey by horse or coach, tedious and uncomfortable as it now seems, had yet the advantage of affording a period of rest from anxieties whilst on the road, and of physical exercise or motion in the open air; the mind being necessarily diverted by the personal incidents of the journey. With the increase of railway travelling, and the greater facilities for transaction of business which rapid communication affords, there has been a corresponding change in the habits of the people, a devotion of more time to the work of life, and a neglect of means adapted to ensure vigorous and resistent physical health.

For that important social change during late years, a progressive increase in the number of the middle classes, which is in great measure attributable to railways, affords the means of avoiding many of those unhealthy influences with which a worse clothed, worse housed, and worse fed population had formerly to contend. There is strength and stamina sufficient to get comfortably through life, but very little of that surplus physical health which we have named resistent. There are the means to fly, but not the power to fight. And so, when a warning comes that the energies of the mind or the endurance of the body have been overtaxed and broken down, it not unfrequently happens that the real source of the mischief is disregarded, the *post* and *propter* are confused, and the disastrous result is attributed to some cause of really secondary importance. This consideration should especially be borne in mind in all cases where impairment of health is attributed exclusively to the influence of railway travelling.

RAILWAY ACCIDENTS.—The information possessed as to the extent and character of accidents occurring on railways is very precise, while other means are available for comparing them with accidents from other modes of travelling. The passenger-trains of the United Kingdom travelled over nearly 50,000,000 of miles in 1859. In 1860, the distance had increased to 52,816,579 miles. The number of railway accidents in four years was as follows:—

| Year. | Accidents. | Killed. | Injured. |
|---|---|---|---|
| 1857 | 62 | 26 | 657 |
| 1858 | 56 | 35 | 467 |
| 1859 | 56 | 13 | 386 |
| 1860 | 68 | 37 | 515 |

In the Metropolis alone there were 70 persons killed and 910 injured by coach and carriage accidents in 1859. In Paris, the numbers in 1860 were 30 killed and 579 injured.* The average number of deaths in coal-mines in this country is 1000 per annum;† and it is calculated that a British vessel is wrecked in each tide throughout the year. Here is proof sufficient of the comparative safety of railways compared with other modes of travelling and with other conditions of life in which the individual does not rely on himself for security.

Average risk to travellers.

Furthermore, it is readily seen what is the average risk to each individual traveller. Of persons killed by railway accidents in the United Kingdom, the proportion to the whole number of travellers was, in 1854, 1 in 7,195,342. In 1860, it was 1 in 5,677,000. In France, it was 1 in 7,000,000. In Belgium, 1 in 8,860,000. In Prussia, 1 in 17,500,000 of all travellers. The proportion of persons killed whilst travelling by diligences in France was 1 in 335,000—about equal to the proportions of both *killed and injured* on English and French railways. On the railways of the United States these amount, however, to 1 in 188,000; but there the cost incurred in constructing the lines is two-thirds less than on European railways.

An unrecognised cause of danger.

Railway travelling, then, as at present conducted, is more free from actual danger to life and limb than any other mode of conveyance. But the returns which show this, also help to prove something more. It would be beyond our province to discuss all the causes which endanger the safety of travellers by rail, for this would involve entering into all the details of railway management. But after long and careful investigation, we deem it right to direct attention here to one source of danger so little known to the public that not even the continual recurrence of accidents clearly traceable to this source has as yet aroused attention to this increasing cause of risk.

COLLISIONS.—Of the whole number of railway accidents (242) occurring during four years, 149 were due to collisions. Of 2136 deaths and injuries in the same time, 1643 were attributable to collisions. In the last six months of the year (during the time when irregular or excursion trains run) the number of collisions was 93, as compared with 56 in the first half of the year.

Causes of collisions.

At any given time, and in the most perfectly appointed train travelling on the most exactly laid line, the lives and safety of the passengers are in the keeping of three men, on whose clearness of head, knowledge of their business, and command of all their faculties, everything depends. These are the signal-man, the engine-driver, and the guard. It is therefore a matter of vital importance that every possible precaution should be adopted to insure that each of these men, when on duty, is at all times in fullest possession of those qualifications essential to the

* These figures are calculated on the lowest estimates. As no account is kept of the number of separate journeys made by season-ticket holders, these have been estimated, after careful inquiry, at twenty-five each ticket. The average length of the journeys in 1854 was computed at twelve miles. The increase is probably attributable to the development of excursion traffic.

† Survaye of London, 1598.

* Revue Contemporaine.

† Quarterly Review, Oct. 1861.

safe conduct of the train. Were this always the case, it is difficult to understand how a collision could possibly occur. If he did not know his business, he should not have been appointed; if he would not attend to it, he was guilty of manslaughter if death ensued. But if he could not do his work, and that through no fault of his own—how then?

Suppose that men wearied out by long journeys and exhausted by fatigue and want of sleep are ordered, on pain of dismissal, to undertake immediately fresh duties for which they are rendered incapable by previous exhaustion of body and mind. Would it not then appear little short of miraculous if some accident did not result? The worn-out engine-driver nods, and a hundred lives are in jeopardy; the signal-man, dazed by want of sleep, becomes confused, and in a moment the engines are pounding up human beings between them. The acute faculties of the guard are blunted by long unrest, the danger-signal passes unnoticed, the break does not second the efforts of the alarmed engine-driver, and next morning there is recorded in the papers another railway accident.

The supposition suggested and these illustrations of accruing results may appear exaggerations to those who for the first time consider this subject; but careful inquiries have afforded us convincing evidence that the system of railway management, so far as concerns the duties of guards, engine-drivers, and signal-men, evinces very little regard to those particular conditions which we have mentioned as essential to render trains ordinarily safe from risk of collision. It is only necessary to cite a few cases by way of illustration, preferring those which have appeared in public print; since the majority of direct personal communications made to us were in confidence—for obvious reasons.

When the collision occurred in a tunnel on the Brighton line last August, the signal-man stated in evidence, "I went on duty at eight in the morning, and should have remained on for twenty-four hours. Twenty-four hours I consider as a hard day's work. I am always glad when it's over—I know that." A letter in the *Times*, *à propos* of this, mentions that a signal-man at Brighton had been thirty consecutive hours on duty.

In the collision which occurred shortly after on the North London line, the signal-man stated that he was on duty when the accident occurred from seven in the morning till ten at night.

On another line, a most intelligent guard informed us that on one occasion he was for forty-six hours without taking his clothes off and in charge of passenger-trains, during this time having only an hour and a half's rest. He believed that he was not equal to his work during the last hours, being dead beat.

An engine-driver on a fourth line said that he had been thirty-six hours on his engine without any interval, taking his meals on the way; acknowledged that few men could stand this; he did not regularly sleep at all during the time, but had a "sort of dog-sleeps;" often had from sixteen to eighteen hours a day on duty for four and sometimes six days a week.

A guard on another line said he had been three days and two nights constantly in charge; and a responsible official on the same line, having peculiar opportunities of obtaining information, testified that this system of imposing extra and unexpected work on the men very generally prevails.

It might be supposed that these are exceptional instances during unusual traffic pressure. But this is not so; and even were it the case, would afford no excuse. For it were far better not to start a train than to send it forth under the charge of wearied men unequal to their duty, and at such risks as we have described.

Fairly worked, there are few operatives so intelligent and trustworthy as railway officials. But they are men, not machines. They have no alternative but dismissal if they demur to orders from superiors, and it is a rule on railways that the last order given is to be obeyed. If dismissed, they have no appeal. There are plenty to take their places, for the pay is high—porters anxious to become guards, firemen ambitious to become drivers. They have appealed to the directors on several occasions without results, and even now a protest is being prepared on the subject. As it is, they have no alternative but to do as they are bid, and we all know that sooner or later discontented men cease to be trustworthy servants.

And not only is the endurance of the men occasionally overstrained to a dangerous extent, but on some lines a regular system of overwork of a most injurious kind has been introduced. The guards are paid by time when on duty; they are thus induced to work for sixteen or eighteen hours a day for four or five days a week, resting on the other days, and receiving no pay; or work the same number of hours during three weeks, and have shorter time on the fourth. The engine-drivers are paid by the trip, with the same result, practically ensuring a temptation to earn extra pay by over-work. Again, it is a rule that men sleeping from their homes have a small allowance as bed-money. To save this, one of the railways has recently directed that the guards of one route, after travelling nearly two hundred miles, shall return the same day, and without any interval of rest, in charge of another train.

We select these particulars from a large number of similar cases, to indicate where blame must lie for proceedings so unjust to the men, dangerous to the public, and injurious to the interests of the companies. For exemption from danger under circumstances such as we have described must tend to make men over-confident or careless, and this must lead to accidents. The impolicy of the present system seems sufficiently evident; but the reports made from time to time by the official Government inspectors do not indicate much likelihood of reform by railway executives, who "seem to prefer the risk of paying enormous sums of money-compensation for accidents and damage, to attempting any improvement."*

The remedy is the simple one of fixing a maximum time of work. It has already been found necessary to adopt this system for Post-office officials travelling on railroads, who are not permitted to exceed a certain number of hours on duty. If such a regulation be found necessary for the work of sorting letters, it is tenfold more needful where the lives of passengers are at stake. It is a duty devolving on Government to provide the remedy and compel attention to it. "A Government which neglects enforcing precautions of this sort neglects one of its most important functions, and allows the lives of those whom it is bound to protect to be endangered or sacrificed by the cupidity, ignorance, or carelessness of the managers and servants (how incompetent soever they may be) of every railway association in the kingdom."†

Before alluding to the personal influences experienced when travelling by railway, it is expedient that we describe the conditions of rail and carriage concerned in producing these results. It is especially important that the causes and character of the motion experienced in all railway travelling be clearly understood. For the following original and lucid report on this subject we are indebted to Mr. W. Bridges Adams, the eminent railway engineer:—

The motion.

"That certain influences on health are produced by railway travelling, as at present conducted, is, I think, beyond any reasonable doubt. Some of these effects are due to causes common to all wheel conveyances, such as jolting while in a sitting posture in an open carriage, and bad ventilation in a close carriage; but the majority are attributable to the peculiar motion which characterizes travelling on railways.

The vibration.

"Ordinary carriages on common roads have flexible springs, and an irregular rough surface to roll over. Railway carriages have very rigid springs, and a regular rough surface to roll over. The large irregular concussions of the highway are converted on the railway into a series of smaller regular concussions. The same diffe-

* Report of Inspecting Officers upon Railway Accidents. March, 1861.
† M'Culloch's Dictionary of Commerce, 1859.

rence may be perceived when Cheapside pavement is up, and the ordinary omnibus turns into the regular granite tram of the side street. The rough motion is changed into a mild but constant vibratory motion, without oscillation.

The oscillation.

"In most vehicles there are two varieties of movement—the vibratory and oscillatory. Vehicles without oscillation are heavy of draught, as was found out by the stage-coach and horse-owners ere the advent of railways. The safety coaches, in which the centre of gravity was kept very low, had scarcely any oscillation. They were pleasant to the passengers, but killed the horses rapidly. The reason was plain: with a high centre of gravity the vehicle could oscillate, and thus the wheels easily lifted over obstacles; with the centre of gravity low, the obstacles resisted the wheels much more. The fact was owing to the imperfection of the springs. The less the amount of oscillation, the more perfect should be the springs, to allow the wheels to yield rapidly. The same thing exists in railway carriages and engines; and shrewd plate-layers know perfectly well that the lofty oscillating engine damages a road far less than one in which the weight is kept low. Locomotive engines may be regarded as nearly springless vehicles. Let anyone who doubts, ride with the driver, and he will soon find the necessity of using his own natural springs by standing on his toes instead of his heels.

Weight of carriages.

"Other things being equal, the easiest carriages are those in which the weight of the vehicle bears the greatest proportion to the load carried. An old-fashioned private carriage weighed some 18 to 20 cwt., and carried about six persons, or 7 cwt., and was easy with one person. A modern omnibus weighs from 20 to 22 cwt., and will carry twenty-eight persons, or 35 cwt. A first-class railway carriage weighs some 5 tons, and carries eighteen passengers, or about 22 cwt. A second-class carriage weighs 3¼ tons, and carries some forty passengers, or 50 cwt. The first-class is easy with one person or eighteen; the second class is usually very uneasy unless fully loaded.

The friction.

"Supposing the ventilation and temperature to be equal, there is no reason why a close carriage at rest should be more unhealthy than a similar apartment in a dwelling, the sedentary posture being maintained for the same length of time in both cases. If therefore the carriage produces physical effects which the dwelling does not, the difference can only be in the movement. Why, then, should the railway produce effects which the common road does not? There is but one answer: the friction is practically greater in amount on the rail than it is on the road. The oscillation may be less, but the friction is more.

"The sounds produced from a violin are a result of friction; i. e., a succession of minute blows produced by the leaping from particle to particle of the powdered rosin which adheres to the horsehair of the bow. This is easily proved by applying grease to the horsehair, when all sound ceases. Sound is vibration; vibration is minute concussion—mischievous in proportion to its regularity and continuance.

"Why, then, is there more friction on the rail than on the road? Simply, that on the road wheels are used; on the rail, in lieu of four wheels, a pair of garden-rollers are used, the wheel and axle moving solidly together. Now a garden-roller will only move forward in a straight line; and the agricultural instrument makers who construct revolving clod-crushers find it necessary to divide their rollers into a great number of separate discs, or the friction would overpower the horses. If railway wheels were applied to omnibuses or road waggons, the horses would not be able to draw them a mile. A Frenchman once tried the experiment here in England (in pursuance of a patent he had taken) by applying a pair of wheels fast on the axle to a gig, with the axle revolving. The result was the same as that of the rustic car of Spain and Portugal—a horrible noise and friction, and destruction to the horse. But these railway wheels or rollers do move on railways, and at two or three miles an hour they move with very little noise or friction, but this 'mobilitate viget viresque acquirit eundo;' at ten miles an hour the change is recognizable; and the greater the pace, the more trying becomes the motion experienced by passengers.

"Railways consist of straight lines and curves. But the so-called straight lines are not straight relatively to the action of the wheels, and the curves are not merely regular curves as designed by the engineer. In truth, the whole railway, *quoad* the bearing of the wheels on the rails, is a series of irregular curves.

The wheels.

"Ordinary road-wheels are conical on their peripheries, and induce friction; but the friction is not incessant, and only takes place when bearing equally over the width. Moreover, the surface on which they roll is more or less yielding, and vibration does not pass unbroken through the wheel to the vehicle. Railway wheels are also conical on their peripheries, but as they bear on a hard surface the vibration is considerable. The object of making them conical is to compensate for the absence of independent movement in each wheel when on curves. If the two wheels fixed on each axle be of equal diameter, they will roll forward in a straight line. When on a curve, at a given speed, the centrifugal force causes the vehicle to hug the outer rail, causing the outer wheel to turn on an increased diameter, and the inner wheel to turn on a decreasing diameter. But if the speed varies the result must be unequal, and friction must go on; and although with a single carriage at low speed the carriage may roll with little friction, it is obvious that this can only be accomplished by lateral deviation of the vehicles from the regular line of traction. With increase of speed there is no time for lateral deviation, and a sledging movement along the rails is substituted for a rolling one.

"The rolling movement over a series of irregular surfaces induces that lateral oscillation which is so unpleasant to passengers. To prevent this, the carriages of passenger-trains are closely coupled together; but the tendency still exists, and the wagging of the last joint of the tail—the break-van—expresses it. The probability is, that from a fourth to a sixth of the whole movement is sledging, increasing with the velocity. In this mode a great amount of surplus power is required, rising from the four pounds of axle friction to the seven and eight pounds of wheel friction, up to twenty-five and twenty-eight pounds per ton. If the vehicles of a luggage-train were as close coupled as those of a passenger-train, the engine could not move them at all; therefore they are loose coupled, and the first operation of the driver is to back the whole of the vehicles one on another, and then to start them in succession. If a goods-train going at very slow pace be watched from a bridge, it will be seen to oscillate, the wheels seeking the path of least friction. If the pace be quickened, the movement lessens whilst the jolting increases.

"But if, in addition to the differing diameter of the wheels on the varying surface of the rails, the vehicles be badly constructed—i. e., the wheels be out of plane with each other, or the axles be not parallel, the vehicle ceases to be a rolling body and becomes altogether a sleigh. Goods-trains have been known which would not roll down a slope of 1 in 75 without engine power, and passenger-trains may be in the same condition if neglected. When the wheels sledge on the rails by reason of irregular pathway, a very heavy torsion of the axle takes place, which increases; in fact, a torsion of the wheel enormously increases the vibration and the risk of breaking both axle and wheel-tires.

The rails.

"These remarks have reference to the action on the peripheries of the wheels; but there is also an effect which is produced on the rail on which it travels. The train is guarded by the action of the side flanges, and not by the tractive power. As the flanges approach the rail there is a constant succession of blows of more or less violence, analogous to the jerks experienced when a vehicle is driven along the edge of the kerb-stones in the streets.

The life of the rail.

"It was originally supposed that — less the condition of rust—rails would last from twenty to thirty years. But the data were imperfect. The calculation was based on a weight of engine and train that would not crush the rails, and on there being a true rolling movement. Practically rails have lasted fifteen years under peculiar circumstances; but under present conditions they are worn out in from three to six years. These conditions are, the enormous weights on engine wheels, crushing the rails into fibres, just as a piece of wood is crushed under a heavy load; and the increase of sledging movement consequent on augmented speed. Let the weights be lessened to the bearing power of the iron, and let the sledging be converted into a perfect rolling movement; then there is no apparent reason why the rails should wear out until destroyed by oxydization. If anyone doubts the fact of the sledging, let him look at the glint or burnish on the rail surface after the passage of a train on a fine sunny day. Metal workers know that burnish is not induced by rolling, which is a mere transference of surfaces, but by sliding, which is an abrading or grinding of surfaces. If two grindstones of equal diameter and hardness were set in motion, with their edges in contact, they might move on for an indefinite time without attrition; but make one move faster than the other, wear and destruction will immediately take place. The gur-r-r-e of the railway train, heard a mile off, is neither more nor less than a process of grinding.

"Try an experiment. Take a portion of polished rail, say 100 yards in length, when glistening in the sun on a bright day. Clean the surface perfectly with a cloth, then test it with the finger after the passage of a train, and it will be found blackened with iron powder. Only a sledging movement forward, or laterally, or diagonally, can produce this effect, and in producing it, vibration and noise are the result, precisely as the rosin on horsehair produces vibration on tension strings.

"The reasoning hitherto is applied to railway wheels in their normal condition with conical peripheries. In order to diminish the destructive action on the rails and tires, the rails are pitched to such angle as to be vertical to the cone. Thus the engine wheels obtain adhesion by friction, as the whole breadth of the surface is moving at different rates of speed. This friction is useful to some extent, but it is destructive also; and when the wheels of the train bear in the same mode over the whole breadth of the rail, the retarding friction and wear become very considerable. Theoretically, to induce the least possible friction the bearing on the rail should be a line, but this supposes a material of indefinite hardness and strength, capable of bearing without surface—a mechanical condition not yet attained. And so the rails flatten out irregularly, the wheels get worn into grooves, and then increased jolting and destruction take place. The wheels do all they can in conformity with the laws of matter to seek the path of least friction, inducing lateral movement at each curve of the rails, but their efforts are counteracted by bad mechanical arrangements.

"The perception that something is mechanically wrong is wide-spread. But they who should remedy the evil will not begin at the beginning; they continue to assume that 'railway wheels are perfect;' and just as there was once a battle as to breadth of guage, so there is now a contest between rigidity and elasticity in permanent way. Truth lies between. In the imperfect condition of engines and trains, a rigid way soon goes to pieces, and therefore yielding must be provided for in the way, if disregarded in the vehicles. In all motion there must be elastic resilience, or destruction will ensue. Friction is an impediment to movement, and elasticity must be afforded to yield to the obstacles which will not yield to the moving body. In passing over the earth's surface in a balloon, we have no sensation of wind or friction, because we move with the wind and there is no sound; but fixed objects opposed to the wind induce noise and vibration by resisting it. The resistance of rails to wheels occurs in many ways. If we look at the rail surface, we find that the polish caused by the wheels marks a sinuous line, sometimes in the centre, sometimes on the outside, and sometimes on the inside of the rails. Unless when quite new there is no such thing as a straight line of bearing, and when at full speed the wheels have not time to follow the small curves. Then, again, the joints are imperfect; they do not fulfil the required condition of making the rails a continuous bar of equal strength.

The bed of the rail.

"But worse than all this is the mode of fixing the rails to the sleepers. The early railway makers fixed the rails on cast-iron chairs, or seats, on stone blocks, which, at eight miles per hour, answer still. But increased speed destroyed rails, chairs, and blocks, and so wooden sleepers were substituted for stone; what was called 'temporary way' proving more durable than the so-called 'permanent way.' The reason is obvious: the loose movement induced by bad structure was found less destructive on a wooden anvil than on a stone one.

"English rails are made what is called double-headed, in order that when the top is worn down, the bottom may be turned up and used as a new rail. To fix them they are placed in cast-iron chairs or seats, which fit the lower rail surface, and are confined there by a wooden key or wedge. With the springing of the rails under the loads, these keys get loose, and the rails dance up and down on the cast-iron anvils, called chairs, adding very materially to the vibration of the vehicles, and rapidly destroying the rails and wheels. The joints are what is called 'fished,' but the fishes or pieces of metal do not represent more than one half the strength of the solid rail, and so the joints work loose. When the rails are worn out on the top, they are commonly found on reversal to be notched on their surface to the depth of an eighth of an inch where they lie on the chairs; and as the top level has altered its form, it is impossible for the rail to lie at rest. Those who have ridden over newly reversed rails do not therefore wish to repeat the experiment.

"In animal bodies the means of motion are muscle and tendon. Tigers or cats can leap from many times their own height without damage. A railway engine or carriage would be destroyed by a very small fall. Removed from the rail to a paved road, either it or the road, or both, would be rapidly destroyed. The reason is that there is great deficiency in the mechanical appliances which should represent muscle. If a malformed man has one leg shorter than the other, he can compensate for the difference of radius by more or less of muscular action. No such compensation is found in railway vehicles. Again: a horse works over hard pavements for years, saving the jolts by the action of his muscles and tendons. After a time his tendons lose their power, and his footing becomes uncertain. The veterinary surgeon interferes and rehardens and tempers his springs or tendons by the process which is called firing. The railway carriage, even at the outset, is in the condition of a worn-out horse. It is as a framework of bones without muscles.

"There is yet a further difficulty. The rolling of the wheels crystallizes the iron of the rails, which, when reversed, is found to have lost its normal strength; and for this reason the officers of the Board of Trade denounce the practice of reversing the rails as being unsafe.

"There is no difficulty, and certainly no need of increased expenditure, in constructing a line and train nearly free from oscillation and vibration; but mechanical laws must be obeyed in so doing. In such case railway travelling might be reduced nearly to the condition of balloon travelling, and it would become a healthy exercise instead of an unhealthy vibration.

"What are the obstacles to it? First, that the existing lines, with their heavy traffic, are not adapted for it; as it is impossible to preserve a line in good order with the heavy engines. By 'heavy engines' is not meant the amount of tonnage on the machine, but the pressure on the individual wheels. Thus a twenty-ton engine on four wheels may be practically a heavier engine than a thirty-ton on six, if too great a load is placed on the driving wheels.

"The next obstacle is the unfair condition in which the officers of railways are placed. If an accident happens, they are made responsible by a jury, and are absolved from blame if they have not departed from any existing practice, and have paid the highest price for their materials. If they have departed from existing practice, however demonstrably superior the new may be, the chances are that the jury will visit it on them as a crime.

"The third difficulty is the alteration of existing stock, and the cost of improving permanent way before already existing way is worn out. The latter difficulty is certainly not insurmountable, as the wearing out is rapid enough.

"There is a fourth difficulty. Almost every alteration in stock on one line interferes more or less with other lines on which the stock runs.

"But the first thing to do is to settle the quarrel between wheel and rail, which, as Stephenson said, should be as man and wife, but at present are a very ill-assorted couple. All other improvements are comparatively valueless as regards the influence produced on passengers, till this improvement shall have been carried into effect."

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THAMES EMBANKMENT.—A Bill for the Thames Embankment has been printed. The general character of the scheme is as follows:—The embankment starts from the lower side of the New Westminster-bridge, ranging with the face of the abutment of the new bridge, and continues in a curved line, following what is generally called Page's line, to the back of the first abutment of Waterloo-bridge. It then starts again from the lower side of Waterloo-bridge, at the corresponding point, and proceeds in a similar curved line until it terminates abruptly against Blackfriars-bridge, 2¼ chains nearly, in about 100 feet into the river beyond the present wharfs and houses. The embankment is solid throughout, and the projection into the river, in some cases very considerable, is to be filled in by soil taken from the Thames, or otherwise obtained. The height of this new wall from Westminster bridge to the east side of the Temple, is to be 4½ feet above Trinity high-water mark. From that point the embankment ascends rapidly by a steep viaduct to the level of Blackfriars-bridge. On the surface of the land thus gained, there is first to be a public road 190 feet wide from Westminster-bridge to the Temple, where it is to become 70 feet wide only, and several new streets are projected. The Bill constitutes a Board for carrying these enormous works into effect, consisting of the chairman and four members of the Metropolitan Board and two members of the Board returned by the corporation of London, thus forming a Board of seven members in all; it empowers the borrowing of one million and a half of money, and gives compulsory powers of purchase, sale, &c., in the usual way.

# DESCRIPTIONS
OF
# NEW REMEDIES
## INTRODUCED INTO THE PRACTICE OF MEDICINE,
## WITH THEIR THERAPEUTICAL EFFECTS.

HAVING announced our intention to devote a special department of THE LANCET in future to the subject of Therapeutics, a few words in explanation of our views seem *in limine* to be demanded. It may be asked, Has not the successful treatment of diseases been always the leading purpose of every department of THE LANCET? In one sense the affirmative is indeed true. But no attentive observer of professional literature and progress can have failed to perceive that pathology and its subsidiary sciences have for a considerable period thrown into comparative shade inquiries into the special properties of remedies in the treatment of diseases. We do not say this subject has been totally neglected: far from it, as the readers of this journal must be aware, and as a glance at the indexes of our volumes will show. But our function has been, to present a faithful picture of the actual advances of the medical sciences; and if therapeutics and therapeutic agents have not held the prominent place which their intrinsic importance should claim, our present purpose is to supply the desideratum, of which, if we are not mistaken, the profession are now conscious. The journalist is certainly not responsible for the past neglect. We could point out favourite treatises on Practical Medicine wherein the treatment is almost exclusively confined to what are designated "general principles," the exceptions being in favour of such remedies as we are presumed to be able to assign a *rationale* of their action. *Pari passu* with a great advance of pathology, scepticism respecting the value of drugs has certainly to a great extent and for a long time past prevailed. Perhaps it would not be far from the truth to assert that the majority of young men at the conclusion of their curriculum of study, on quitting the lecture-room and hospital, have been more or less infected with this scepticism. Once, however, engaged in actual practice, and witnessing the effects of the remedies which the requirements of their patients compel them to administer, these doubts altogether, or to a considerable extent, disappear; and no information is more acceptable to the practitioner than such as relates to the power of medicines to relieve symptoms and to effect the cure of diseases. The tendency to rely on the restorative powers of nature, aided by diet and such general measures as, with slight modifications, might be presumed to forward recovery in all cases, culminated in the effort of the late Sir John Forbes to establish a *médicine expectante*, under the designation of "Young Physic." Perhaps the very work which forcibly and fully set forth all that can be well urged in favour of scepticism respecting the virtue of drugs has as much contributed to change the current of opinion as anything which has been written against it. The author could not overlook the fact that in many very common and formidable diseases we all rely with confidence on the curative power of agents which come under the familiar designation of specifics. Accordingly, as exceptions to his general principle Sir John enumerates the following:—Peruvian bark and its alkaloids in *agues;* iodine in *bronchocele;* iron, zinc, and arsenic, in *chorea;* iron in *chlorosis;* opium in *delirium tremens;* colchicum in *gout;* mercury in *inflammation of serous membranes of the eye, liver, heart, and brain;* iodide of potassium in *nodes*, whether gouty, strumous, or syphilitic; iron, quinine, and arsenic, in *neuralgia;* lemon-juice, fresh animal and vegetable food, in *scurvy;* mercury in *syphilis.*

Probably no single reader would give his unqualified assent to the correctness of this enumeration. For the most part it would be considered that many additions might be made on as good grounds as any that are admitted into the list. Some would object to the term specifics altogether; in fact, this term ought, perhaps, to be dismissed from our vocabulary, as, in the controversies to which it has led, it is evident that it has been used in various and conflicting senses. In its old and offensive meaning—*a remedy which will always and infallibly cure a disease*—no such thing is known. If intended to designate only agents of which the *modus operandi* physiologically is obscure, or such as admit of no strict classification with others having similar properties, it will include nearly the whole materia medica. The term special may be properly substituted; and when we say of a remedy that it has a *special* action on the system, if our powers of observation were perfect, we should probably find every drug has some special action, and, in some respects, could not be fully replaced by any other. Now, it is evident that, so far from such a principle being generally admitted, nearly every writer on therapeutic agents has his own system according to which they are grouped. May we not assert that all generalizations on the subject are at least premature? It certainly has conduced to the neglect and ignoring of the special properties of drugs to classify them as tonics, narcotics, stimulants, &c. It has recently been discovered, for example, that opium and belladonna, which have almost always been ranged together as narcotics, not merely differ essentially in their action, but are actually antagonistic. It has been long known that one dilates, while the other contracts, the pupil; but it has been recently proved by Dr. Anderson, to use the words of Dr. Maddin, "that opium occupies to belladonna and its kindred drugs the relation of a therapeutic antithesis, and they furnish to each other in any quantities safe and reliable antidotes, the pupil being in all such cases a certain index as to how far we may with safety proceed in their use."

No department of medicine is so fruitful of hypotheses as the therapeutic *modus operandi* of drugs. In some instances, perhaps, we may accept the offered *rationale* as well founded theories; but upon the whole we must receive as ultimate facts the recorded experience of their effects. Nearly twenty years ago, when THE LANCET entered upon a new series, sanguine hopes were entertained that organic chemistry was about to supply a solution to many problems belonging to this subject, and we consequently devoted much attention to that science. The investigations of Liebig, Mulder, Bunsen, Pettenkofer, Reichenbach, and others which preceded the efforts in this direction of Golding Bird, Day, Bence Jones, Garrod, Parkes, Beale, &c., have scarcely in a single instance satisfactorily explained the remedial action of an organic substance; if more successful with acids, alkalies, and inorganic bodies, as some think, it has only been to a very limited extent. It might also have been anticipated that ere this our more precise physiology and pathology would have been available as a guide to a selection of remedies; but hitherto they have also, in the main, failed. If there is any exception, it is the recognition of a zymotic origin of many diseases, and the adoption of substances as remedies which are known to arrest the physico-chemical processes of putrefaction, fermentation, and analogous transformations occurring in organic bodies when deprived of life. Hence we are thrown back for our materia medendi upon the method as old as our art—of relying upon simple experience; and this has all the weakness, and is surrounded by all the fallacies besetting human testimony—incomparably less certain and safe than scientific processes for the discovery of truth. Nevertheless, if this species of evidence is carefully collected and fairly estimated, it will furnish us with much that is needed for practical purposes. It has been the attempt to discard the method of close observation and experience, and seeking to replace it by scientific guidance, that has been the cause of the deficiency, or rather backwardness, of our therapeutics. This is the fal-

lacy which produces systems, classifications, reliance on botany, chemistry, and pathology, and finally leads to the attempt to conduct the treatment of diseases without having recourse to special remedial agents.

It is our intention in subsequent papers to point out some of the sources of error and certain difficulties attaching to the records of experience respecting remedial agents, and to treat in detail of many which are gradually coming into use, although still unknown to the majority of the profession. That this branch of medicine has for some time been more energetically pursued in America than in Great Britain may be in a general way known to many of our readers; but few, we think, are aware how numerous and valuable are the remedies brought into daily use by American physicians. A certain amount of suspicion always attaches to the statements of all writers on new remedies, and it is generally found necessary to subject their conclusions to searching experiments. On the other hand, we often lose the benefit of real discoveries by reckless denial on insufficient data or ill-performed observation. A medium course is now demanded. When we have the concurring testimony of several or many practitioners to a therapeutic fact, the failure of one or two to recognise it should only be accepted under very complete conditions. That a very small proportion of the plants known to botanists have been as yet studied for their remedial properties must be obvious to everyone; and when we consider the energy and value of many of those found in our materia medica, we must acknowledge that there is *primâ facie* evidence that nature may yet yield us remedies which will greatly extend therapeutics. But to derive any new powers from this source, we must to a certain extent reverse our past policy. We must rather encourage credulity than indulge in scepticism; at least we ought to receive the testimony of observers in past times as the starting point for our new and more carefully made experiments; and we may with confidence anticipate that nature is not exhausted by our most copious lists of materia medica.

### VERATRUM VIRIDE (AMERICAN HELLEBORE).

We have selected this plant for a detailed notice, not only for its remarkable properties, but because, if known to some of our readers, it can scarcely be so to many. It is not mentioned by Neligan, Headland, Copland, Watson, Christison, Garrod, Royle, Williams, Tanner, or Fuller. The reason for this collocation of names will subsequently appear.

Dr. Pereira has an article on it in small type, as if it were of little importance, and he remarks that "it resembles white hellebore in its medicinal effects and uses;" while of the latter he states "that even in moderate doses it produces violent vomiting and *purging*." How far this is from being correct, we shall see in the sequel.

In Dr. Jacob Bigelow's "American Botany," vol. ii., published in 1817, the results of experiments with it in thirty cases by Dr. Ware are stated. Dr. Ware found it acted as an emetic, but that it required a longer time before vomiting ensued after its exhibition than other emetic substances. In no instance was purging produced, even when it failed to vomit, which, Dr. Ware remarks, "is very singular, as most emetics, if they fail to produce vomiting, have their action determined downward, and act as powerful cathartics." He considered it applicable and remedial in gout, and applied externally in certain cutaneous diseases. Dr. Ware *did not notice its effects on the pulse.*

In a very excellent paper on the subject by Dr. Osgood, of Rhode Island, in the *American Journal of the Medical Sciences* for August, 1835, it is stated that Dr. Tully, of Yale College, was in the habit of entering fully into the properties of veratrum viride in his lectures, describing its narcotic and emetic action, and claiming for it the power of exciting the secretions of the liver, the bronchial membranes, and the kidneys. As an evidence of its peculiar narcotic power, Dr. Osgood mentions that the New England farmers soak corn in an infusion of the roots, and sprinkle it on their fields. Birds partaking of this become narcotized, and unable to fly or walk, and are readily caught; but if left alone they soon recover, and fly away. He states that its influence on the circulatory system is very decided. When the pulse ranges between 75 and 80, it will reduce it to 35 or 40 in the course of a few hours. Small doses of laudanum or brandy counteract its narcotic effects, and give relief if carried too far; camphor and ammonia afford relief, but not so effectually as the laudanum and brandy. It is useful in gout, asthma, dysentery, and dyspepsia; in coughs, catarrh, acute rheumatism, and pneumonia, except in low typhoid cases. Dr. Osgood used a tincture of the fresh root (six ounces to sixteen ounces of spirit of wine) in doses of half a drachm one drachm.

The next writer on the properties of the veratrum viride was Dr. W. C. Norwood, in the *Charleston Medical Journal and Review*, 1852. In some respects he differs from Dr. Osgood, alleging that it is not narcotic, never stupefying like opium, but acting as a nervine, allaying morbid irritability, convulsions, and neuralgia, and relieving chorea and epilepsy. He states that "it is a safe emetic, and, by virtue of this action, peculiarly applicable in hooping-cough, croup, asthma, and is a certain most powerful expectorant and diaphoretic; but its power as an arterial sedative is its most interesting and valuable property, for which it stands unparalleled and unrivalled. It is not cathartic, and in small doses it creates and promotes appetite beyond any agent with which we are acquainted."

Dr. George B. Wood, in his "Therapeutics," speaking of veratrum viride, observes:—"When it produces emesis, it is longer acting than any other medicine—usually three quarters of an hour or longer. It seldom or never purges; in this it remarkably differs from veratrum album. In doses insufficient to vomit, it produces feelings of chilliness, a sense of muscular weakness, and a great diminution in the frequency and force of the pulse. Dr. Norwood states that he has seen it reduce the pulse as low as 35 in a minute, without the least nausea or vomiting.

"When carried so far as to produce nausea and vomiting, its depressing effects on the circulation and nervous system are often very striking. The pulse falls from 75 or 80 down to 35 or 40, and becomes small, feeble, and occasionally almost imperceptible. The surface is pale and covered with a cool sweat. The patient at the same time experiences a sensation of chilliness, and sometimes tingling or numbness. Headache, vertigo, dimness of vision with dilated pupils, faintness, stiffness of certain muscles, and a want of command over them, evince its sedative operation. These signs of prostration are sometimes alarming, but no fatal poisoning has been known. The depressing effects are attended with stimulation of the secretory functions. The salivary, pulmonary, biliary, cutaneous, and urinary secretions are increased by doses insufficient to produce nausea and vomiting."

An excessive action of this medicine is easily controlled by opiates and alcoholic stimulants. In cases of extreme nausea and vomiting the opiate should be administered by enema.

The veratrum viride is applicable in all inflammations except gastric, but is especially valuable in *pneumonia*, and has been employed very extensively in the southern states of North America; and the testimony in its favour is so strong, and from so many sources, that it is impossible to refuse it credence.

The plan pursued is to give eight drops of the saturated tincture every three hours, adding one drop to each dose until the pulse is reduced sufficiently, or nausea and vomiting supervene; then the dose is to be so reduced and managed as to maintain the low state of the pulse, without disturbance of the stomach. The nausea is readily counteracted by a little morphia. The inflammatory symptoms decline with the pulse, and a very favourable convalescence ensues.

In *acute rheumatism* it is no less efficacious. In this disease it should be associated with opiates to give the patient ease, and repeated every three or four hours, in such doses as not to produce sickness. It appears not to be so useful in chronic rheumatism.

"Dr. Norwood's tincture is," says Dr. Wood, "the best preparation. It is made by macerating eight ounces of the dried root in one pint of alcohol (rectified spirit of wine) for fourteen days. The root must be fresh dried, as it loses strength by keeping. The dose, four to six drops at the beginning, should be gradually increased until some obvious effects are produced. If the pulse is reduced or nausea occurs, no increase of the dose should be made; if vomiting, it should be suspended. When resumed, the dose should be diminished."

Dr. Wood's "Therapeutics" (second edition) was published in 1858. He evidently derived his information from the preceding authorities, and probably others not known to us.

In 1856, a member of a Medical Society in Massachusetts having called attention to the veratrum viride at a meeting, a committee was appointed, in March, 1858, consisting of Dr. Ephraim Cutler, Dr. Newman Rickard, and Dr. Wm. Ingalls, to investigate and report upon its medicinal properties. The delay appears to have arisen from scepticism.

The course taken by the Committee was to obtain a large supply of the fresh roots, to subject them to the process of drying, to prepare a tincture, and distribute bottles of it amongst the members. The roots, thoroughly cleansed without

removing the fibrils, were dried by means of a current of heated air, and were broken into fragments, and then ground in a coffee-mill. In this way Dr. Norwood's tincture could not be prepared, as one pint of alcohol (spirit of wine 94·1) would not even damp eight ounces of the coarse powder. They therefore employed about half the proportion, making, by maceration in spirit of wine, and displacement with equal parts of spirit of wine and water, ten gallons of tincture with twenty pounds of the dried root.

The first report of the Committee was made in October, 1858. It consists of communications from ten physicians, and the details of thirty-four cases of various diseases, both of children and adults. The Committee considered the following conclusions to be fully warranted:—

As an arterial sedative, it is more certain than any other medicine. It reduces the number of beats of the pulse with remarkable constancy and uniformity. In some cases, from individual idiosyncrasy, larger and more frequent doses are needed than in the majority. Its use for this purpose is perfectly safe, as, when carried too far, nausea or diaphoresis, or both, give timely warning that the dose must be diminished or its use suspended. It seldom or never purges, and hence its action is quite unlike that of veratrum album. It is an arterial sedative of great power and reliability.

A second report was published by the Committee in October, 1861, containing the details of the experience of thirty physicians. The majority bear testimony to the alleged power of the veratrum viride over the heart, and to its great value in the treatment of many diseases characterized by vascular excitement. As might be expected, two or three of the number failed to observe the phenomena witnessed by the majority. The Committee hint at the strong prejudices which are entertained against new therapeutic agents, and the rarity of absolute unanimity of physicians on the medicinal properties of any agent.

The diseases in which the remarkable property of veratrum viride renders it applicable are:—1. Pneumonia, without any other remedy. It relieves the dyspnœa, promotes expectoration, and effects a rapid recovery, both in children and adults. 2. Pleuritis. 3. Peritonitis. 4. Palpitations. 5. Hypertrophy of the heart. 6. Acute rheumatism, for which it is said to be the most effectual remedy. 7. All inflammatory diseases, whether idiopathic or from surgical injuries. 8. Acute mania.

The following authorities point to other special uses of the veratrum viride:—

Dr. H. H. Toland, of San Francisco, states that he found the veratrum viride invaluable in pneumonia, pleuritis, and catarrhal fever, both in adults and children; and equally so in active hæmorrhages. "Hæmoptysis," he says, "accompanied by increased arterial action, is arrested more speedily by this than any other or any combination of remedies. Administered alone in acute rheumatism (a disease very common and severe in California), it is more efficacious than any remedy heretofore employed. Besides controlling the action of the heart, it relieves the pain and acts as a diuretic; prevents metastasis to the heart, which so frequently follows venesection. To the surgeon it is indispensable. In traumatic fever it reduces the pulse to the normal standard."

Dr. T. S. Smith, of Tennessee, thinks the veratrum viride does not reduce the force and fulness of the pulse in proportion to the diminution of the frequency. It cures pneumonia; and when, in this disease, the pulse is reduced in frequency by its agency, the heat of skin, thirst, and pain subside, and free perspiration follows.

Dr. Baker, of Alabama, considers the veratrum viride to be as valuable as a nervine as an *arterial sedative*—"the most efficacious remedy in the convulsions of children that we possess, and highly useful in puerperal convulsions and chorea."

Dr. B. Fordyce Barker, Professor of Obstetrics in the Medical College of New York, in an interesting *brochure* "On Puerperal Fever," gives us his testimony to the value of the veratrum viride as an arterial sedative. "We have," he says, "in the materia medica an agent lately brought prominently before the profession which acts specifically as an arterial sedative without depressing the vital powers. By it the pulse can be brought under voluntary control. For more than twelve years I have used it in puerperal fever, and in no disease have I found its value more strikingly exhibited. It is an agent which requires care in its use, and where its full effects are required, I never allow them to be left without careful medical watching. The patient must be seen at short intervals. I have never seen any unfortunate results from its use; but I have seen it give rise to very severe temporary depression."

This wide range of applications will be readily admitted to be highly probable if the primary action on the pulsation of the heart be, indeed, a fact; and this surely admits of very ready proof. It is also claimed for it, that such diseases as are treated solely with it are followed by very rapid convalescence and vigorous health, and this after diseases which ordinarily leave great and prolonged debility. This peculiarity is supposed to arise from its tonic effects on the stomach, promoting the appetite and healthy secretions, and exerting a soothing influence on the nervous system. Such pretensions as these obviously demand the support of extended observation and experiment.

Chemists tell us that the veratrum viride contains an alkaloid which they cannot distinguish from veratrin. It seems probable that no complete investigation has been instituted on the subject, and its therapeutic action would seem to indicate its being essentially different.

It will be observed, that all the authorities we are able to quote are American. If used in this country, the veratrum viride has found no one to record its effects; but we are able to add, that we have good reason for asserting that the witnesses referred to are really trustworthy. British practitioners do not need to be instructed in the wide and extensive applications they will find for an instrument possessed of a power we greatly need in a great number and variety of cases. To be able to control vascular excitement whenever it occurs, either when it is a curative effort of nature passing salutary bounds, or itself a diseased action, will certainly be felt to be a most valuable acquisition.

# Correspondence.

"Audi alteram partem."

## POOR-LAW MEDICAL REFORM ASSOCIATION.

*To the Editor of* THE LANCET.

SIR,—In my last communication I laid before you the evidence of several witnesses which was tendered to the Select Committee of the House of Commons on Poor Relief against the permanency of appointment of Poor-law medical officers. I will now draw your attention to the evidence on the opposite side, and leave your readers to form their own conclusions.

I am, Sir, yours, &c.,

Royal-terrace, Weymouth, Dec. 1861. RICHARD GRIFFIN.

*Substance of the Evidence laid before the Select Committee of the House of Commons on Medical Relief.*

Mr. John Bowering, clerk to the Board of Guardians of the City of London Union, quotes in his evidence the petition to the House of Commons from the City of London Union,—"That your petitioners recommend that in cases where the guardians are satisfied that any officer has failed in the faithful discharge of his duties, that they should be empowered to discharge such officer without the sanction of the Poor-law Board;" and says, "their annually elected guardians would have full power in dismissing officers intended to be permanent. So one set of guardians might take a view of the conduct or character of their officers, and another set next year might take a different view, and the business of the officer would be to conciliate the view of those annually elected guardians; the officer would be playing a game of see-saw with them. It would affect the efficiency of the officer; no doubt of it. I would say that the integrity of the administration of the Poor-law would receive a blow from which it would never recover, unless by some radical alteration of the law similar to that which took place in 1834. Inquiries by the Poor-law Board into the conduct of their officers may be a very irksome and most inconvenient system for the independence of the guardians; but the opposite would be attended with ten times more evil if the guardians in the fit of the moment could dispense with the services of any officer when a strong minority might be in favour of him. The board of guardians is a fluctuating body, and might change its appointments from time to time according to those whom it might wish to favour. For that reason I wish to have a controlling power with regard to the officers. Favouritism is less likely to be shown by a smaller central body than a large local body. Frequent complaints are made to the central board from individuals of the conduct of officers of unions, relieving officers, medical officers, and clerks, which have been referred immediately by the central board to the board of guardians. Dismissal of clerks or officers for misconduct is very rare. I do

not think that a yearly election is a good thing. The medical officer should feel as much permanency in his situation as the relieving officer or as the clerk, and he should hold his situation during good conduct."

Mr. J. M. Johnson, guardian, West London Union, in his evidence says,—"Then as to the medical officers, perhaps the Committee will be kind enough to follow me for a minute or two whilst I state my objection to giving the appointment and discharge into the hands of the guardians, subject to the exercise of their discretionary power, a term which has been very much abused in the course of this investigation. It is admitted by all, with regard to medical officers, that the chief point of their usefulness is their personal acquaintance with the constitution of their patients. A medical officer must first of all study the ins and outs of all the courts in the union; he must go into the dwellings of the patients who are receiving out-door relief; he has known them for years; he knows the diseases to which they are subject, and he treats them accordingly: that could not be the case with the medical officer if he is frequently changed. ..... I think it is perfectly ridiculous to demand such a thing. All the officers would become the servants of the guardians instead of their officers. I cannot give my consent to that, and I objected to the proposition when the petition was discussed at the board. It was construed into a hardship last summer, when one of our medical officers was suspended by the guardians and a deputy appointed. The suspension was reported to the Poor-law Board, and in due course the district inspector came down and investigated the matter. He conducted his examination most carefully, and all parties were heard. The result was, that the Poor-law Board sanctioned the suspension of the medical officer under the circumstances, but, taking into consideration his very long services, and that there had never previously been a complaint against him (his services having extended over thirteen years), the Board, without commanding, recommended the guardians, in a very conciliatory manner, to remove the suspension. That was accordingly done; but the quarter had turned, and a little account came in from the deputy who had discharged the duties, and all officers, by the order of the Poor-law Board, being entitled to salary during the time of suspension, if such suspension is removed, the medical officer of course was advised to pursue his right, and accordingly claimed his salary; and with regard to the salary of the deputy, his right could not be disputed at all, and consequently the board had to pay two salaries (about £17); and that, which was an exceptional case, has been taken advantage of to claim for the guardians the right to dismiss their officers at once. If they had had discretionary power, they would have dismissed the medical officer, and there would have been no appeal."

F. J. Stretton, Esq., auditor, St. Pancras parish.—"The vestry, under the local Act, appoint all the officers of the directors; the directors may suspend, but the vestry alone have the power of dismissing the officers. I believe that is very pernicious; there is a want of independence in the officers that is lamentable. I believe that there have been, and are still, officers in that parish who are afraid to do what they believe to be right because of losing their positions. The officers must take their directions from those fluctuating bodies, and that, I think, is very pernicious, especially with reference to the officers in the workhouse, because the control and management and treatment of the poor in the workhouse vary very much according to the party who may happen to be in power. I have observed it (want of independence) in officers who have been almost absolutely compelled to take tickets for parochial dinners, because they have been afraid of being dismissed if they did not do so. I merely mention this to show how much the officers are themselves under the control of persons happening to be in power at the time. I believe the power of dismissal is very injurious."

Mr. Griffin quotes the opinion of the Poor-law Commissioners in favour of permanency of appointment, and says,—"Unless a medical officer is free to recommend meat and other necessaries for the poor placed under his care, without fear of being displaced for so doing at a given time, the poor must suffer. These orders are the main ground of the guardians wishing medical officers to be annually appointed, or only for a short period. Do away with the permanency of the appointment, and the inevitable result will be an immense sacrifice of human life, as, whilst the dread of displacement hangs over the medical officer's head, he may look rather to please the guardians than to consult the good of the poor."

Robert Fowler, Esq., M.D.—"I am quite of opinion that medical officers should be permanently appointed; it tends very much to the advantage of the poor, and it is also but fair to the medical officer. Why should not the pauper, whose only crime is poverty, have those advantages derivable from that enlarged experience resulting from uninterrupted medical supervision, and which are accorded to every criminal in a gaol?"

The Committee of Metropolitan Poor-law Medical Officers recommend, that in order to ensure to the sick poor the full benefit of medical aid, the appointment of the Poor-law medical officer should in all cases be made permanent. Frequent changes of the medical attendant act injuriously by precluding the sick poor from the benefit of that enlarged experience of their constitutional peculiarities which results from an uninterrupted medical supervision. In common fairness to the medical officer his appointment should be made in all cases permanent, in accordance with that just principle which makes tenure of office dependent solely upon the due fulfilment of duty, and which is adopted in all public appointments of the civil service, the naval and military service, and in almost all private cases also.

## TREATMENT OF INDOLENT ULCERS.

*To the Editor of* THE LANCET.

SIR,—Through the medium of your valuable journal, allow me to offer a few remarks on a new method (in the United Kingdom at least) of treating old indolent or callous ulcers generally, but more particularly of the leg. No doubt it is and has been introduced into foreign and continental practice, where I had very many opportunities of treating and seeing treated, not only with marked and undoubted success, but the healing process seems, or I may say does complete itself, in little more than half the time the ordinary treatment occupies. I therefore take the liberty of bringing it before the notice of the medical profession generally, and leave it in their hands to judge as to whether it is likely to meet their approbation or not.

The method is very simple, and within the reach of every one. Supposing you have a case of old indolent ulcer, for example, all you have to do will be to wash the leg well; after so doing, fill up the excavated ulcer with fine powdered carbonate of iron, afterwards applying a large linen pad, without any moisture coming near; then envelope the whole limb in a starched bandage, allowing it to remain for three weeks or so, according to the extent of ulcerated surface. Another feature in this method is, that the patient need not be confined to bed, or be enjoined absolute rest, but can even walk a little every day. The limb must be kept perfectly dry.

I am, Sir, your obedient servant,

Lancaster Infirmary, Dec. 1861. J. MITCHELL, L.R.C.S. Edin.

## ARSENICAL PAPER.

*To the Editor of* THE LANCET.

SIR,—Your recent articles upon the dangers of arsenical pigments for colouring wall-papers might, I think, be well supplemented by directing attention to the injurious though still common practice of using such papers for the purpose of enclosing articles of daily consumption. Herewith I send you a wrapper which contained chocolate, manufactured by an eminent firm, and supported by a testimonial from Dr. Hassall, whose attention I am persuaded could not have been drawn to the noxious covering, which the usual tests amply prove to be an arsenical pigment. A thin glaze covers the colouring matter, totally insufficient to prevent its detachment upon the least crease or crumple. Now the use of a paper so highly charged with deleterious matter, coming (as this would) in constant contact with various other articles of the domestic economy, cannot, I am sure, be too greatly reprobated.

Hoping thus to bring an apparently unobserved evil under notice, I remain, Sir, yours obediently,

Park-place, Gloucester-gate, Regent's-park, December, 1861. EDWD. DYER.

## PARISIAN MEDICAL INTELLIGENCE.

(FROM OUR SPECIAL CORRESPONDENT.)

WHAT is the usual fee paid for medical attendance in Paris? is a question not unfrequently put to me by my English *confrères* who visit this capital, and one, moreover, which I have found considerable difficulty in answering. The Paris fees

range in fact from two and a half to forty francs per visit. The hard-working general practitioner, whose functions comprise everything, from the prescribing of a tisane up to the application of the forceps, is very commonly obliged to accept the first-named slender remuneration in payment of his diurnal "iter," whilst MM. Andral, Trousseau, Velpeau, and I may say all the "celebrities," are entitled, by custom, to the sum of two Napoleons as the consultation-fee. The social position of the French "médecin du quartier," answers pretty accurately to that of the family apothecary in England, barring always the matter of dispensing, which, as you are well aware, is unknown in this country. Certain physicians and surgeons have, it is hinted, their own favourite chemist, and malicious report, of course, adds that a portion of the drug-profits somehow does not find its way into the pocket of the "pharmacien;" going, no doubt, into that same mysterious limbo which contains the lost pins and dead postboys of creation. One great advantage possessed by the Paris practitioner over his London *confrère*, consists in the comparatively narrow area which the former has to traverse. Owing to the horizontal package of the population in flats, and the ranging of families tier over tier, like herrings in a barrel or passengers in an emigrant-ship, the ground room occupied by several hundreds of people is reduced to something inconceivably small; and each house represents numerically the equivalent of a street on your side the Channel. I was informed, some time ago, that one of the large habitations on the Boulevard de la Madeleine, afforded lodging to upwards of forty families. It is easy, therefore, to conceive that an immense saving of time and economy in carriage hire must result from the prevalence of this system of building. In the matter of obstetrics, the fee for each accouchement varies from 25 francs (which is, perhaps, the lowest paid to the *man* midwife) up to 600 francs or £24, which is, with few exceptions, the highest claimed in any ordinary case. Surgical operations constitute the branch of practice in which the greatest latitude is allowed. I happen to know of two cases, one that of a common boil on the lower lip, and the other that of a fistula in ano, in which the ordinary operations were performed, and for which, in the first instance, 1000 francs (£40), and in the second, 5000 francs (£200), were claimed, both sums being paid without demur or expostulation on the part of the patients or their friends. Amongst the English practitioners (now about fourteen in number) established in this capital, a standard somewhat higher than the French average prevails. The consultation-fee is 40 francs; that for a single and casual visit, 20 francs; and during a prolonged attendance, 10 francs. This scale of charges is adhered to with few exceptions; and when it is remembered that a considerable amount of gratuitous practice is necessarily entailed by the presence of a large British pauper population, its rate will not appear exaggerated. By means of that excellent institution, the British Charitable Fund, medicines, in addition to the ordinary necessaries of life, are furnished gratis to the indigent; and the many hundreds of English poor, whom fortune has stranded in this capital, are provided with an efficient substitute for the system of parish relief at home. Several hundreds of broken-down jockeys, stablemen, crippled railway excavators, gas-fitters, calico-printers, tailors, shoemakers, servants out of place, aged widows, and orphans, the English paupers of Paris, owe to this charitable institution their means of daily subsistence; and if its funds, now reported to be low, do eventually become exhausted, it is to be feared that many must die of starvation.

A suit is at present pending between the old and new medical societies of the twelfth arrondissement, regarding the possession of a name and archives, which are claimed by both; the name being that of "Société Médicale du Panthéon." A decision of the tribunals, to which the case has been submitted, is shortly expected to solve the difficulty.

The distribution of prizes, and a critical retrospect of the scientific life of M. Chomel by the perpetual secretary of the Academy of Medicine, occupied the attention of the public on the 17th inst. M. Dubois, no doubt, had read in THE LANCET your Paris correspondent's late remarks on the cloying sweetness of the ordinary regulation-panegyric, and was determined for once, at least, to escape the imputation of flattery; and, accordingly, in the most polite, gentlemanlike and academical phrasseology, upset, pounded, and pulverized the image which M. Grisolle, the professor, had set up—after the fashion of Nebuchadnezzar—three years ago.

Several of the Paris medical journals give the various ages of the present professors of the Faculty of Medicine, which are as follows:—M. Moreau, 72; M. Cruveilhier, 71; M. Rostan, 71; M. Piorry, 67; M. Paul Dubois, 66; M. Velpeau, 66; M. Andral, 64; M. Bouillaud, 64; M. Langier, 63; M. Jobert de Lamballe, 62; M. Trousseau, 60; M. Guillot, 59; M. Moquin-Tandon, 57; M. Malgaigne, 55; M. Nélaton, 54; M. Dénonvilliers, 53; M. Gavarret, 52; M. Bouchardat, 51; M. Grisolle, 50; M. Longet, 50; M. Tardieu, 45; M. Würtz, 44; M. Gosselin, 43; M. Jarjavay, 42; and, lastly, M. Regnault, 37.

A late number of the *Bulletin de Thérapeutique* contains an able paper from the pen of M. Fonssagrives, the chief of the navy medical staff, on the part played by calomel in English therapeutics, to which I would refer your readers. This brief essay, eminently practical in its nature, is calculated to initiate our French brethren into the use of mercurial remedies as understood in England far more completely than the many volumes which have hitherto been dedicated to the subject in this country.

Baron Larrey, son of the celebrated surgeon of the first empire, and army medical inspector, has presented to the Institute an original portrait of the First Consul, in the costume of a member of that assembly. The picture, painted by a pupil of David, is said to reproduce with great fidelity the fine features of the illustrious Napoleon the First.

Letters from Naples mention that considerable apprehension had been caused at Torre del Greco by the evolution of carbonic acid gas, in large quantities, from the fissures opened in the soil during the late eruption. This deleterious agent had also strongly impregnated the water of several wells at the foot of Vesuvius, and the death of a large number of fish along the coast was attributed to its intermixture with the sea-water. M. Palmieri, the director of the observatory at Naples, has ascertained that in certain parts the soil-level has been raised upwards of a yard above the normal elevation; and to this uplifting of the surface he attributes the hitherto unexplained phenomenon of the retrocession of the sea.

Dr. Fournier has addressed to the Academy of Sciences a paper on the subject of Local Anæsthesia, and details a new process for its production, which is called "Chloracetization." His method for producing local insensibility to pain is that of exposing the part to be acted on to the fumes of a mixture of acetic acid and chloroform. "If," he says, "in a room, the temperature of which is upwards of 63° Fahr., the mouth of a thin glass bottle, half filled with a mixture composed of equal parts of pure crystallizable acetic acid and chloroform, be exactly applied to a clean and healthy skin, not deprived of its epidermis, and if this phial be constantly maintained at the temperature of the hand, complete anæsthesia of the part included by the orifice of the bottle will be attained." M. Fournier proposes to utilise this discovery for surgical purposes by directing the vapours of the chloro-acetic compound upon the parts to be rendered insensible to pain by means of a retort, the rest of the limb being protected by diachylon plaster from the benumbing action of the anodyne emanations; and suggests the employment of his method in those cases where general anæsthesia may be deemed inadmissible.

The bulletin of the Paris observatory contains every now and then very valuable hints for invalids actually suffering from bronchitis in northern climates, and only waiting for a lull in their symptoms to escape from fur cloaks and cough lozenges. The 21st was a very cold day here, and at eight in the morning the thermometer stood at 28° Fahr. At the same moment the temperature at Havre was 35°; at Lyons, 36°; at Montpellier, 37°; and at Marseilles, 47°. At Toulon, again, also at eight A.M., on the same day, 50°; and at Algiers, 59°; evidently Mr. Cobden was quite right.

The municipality here are, if we may judge by their estimates for the sweeping and clearing away of snow and ice from the streets, in expectation of a hard winter. In 1860, 3,0~6,866 francs were voted for this particular item, and in 1861, three and a half millions of francs were set aside for the same purpose; but for the oncoming year the expenditure is estimated at 3,689,700—an ominous increase, implying considerable assumption weather-wisdom on the part of the town councillors.

M. Bouillaud has been unanimously elected President of the Academy of Medicine for the present year (1862.) The learned Professor of the Charité thus occupies, for a second time, the place of honour in the most imposing of all the medical assemblies of France.

The sitting at the Academy of Sciences on the 16th inst. was almost exclusively monopolized by the announcement of the prizes awarded for last year, and of the subjects proposed for future competition.

The work of MM. Lallemand, Perrin, and Duroy, upon the

action of alcoholics on the human organism, has been judged worthy of the £100 prize offered for the best original essay on medical or surgical subjects. Among the questions proposed for future competition, are the "History of Pellagra," and the "Application of Electricity to Therapeutics," for each of which an award of £200 is offered; also, the great subject of the moment, "The Restoration of Bone by means of the Periosteum, surgically considered." In addition to the sum of £400 to be bestowed by the Academy on the author of the best practical essay on the last-mentioned topic, the Emperor has added an equal sum, with a view, no doubt, to stimulate the cultivation of conservative surgery by the French military surgeons, and thereby to abridge the future lists of maimed pensioners.

The *Corriere Mercantile*, of Genoa, mentions, as an indication of the unusual mildness of the season previous to the late change of weather, that all along the coast the fruit-trees had not only blossomed, but actually produced a second crop of fruit. Apples and pears had attained the size of walnuts, and plums one-half of their usual magnitude.

The intense cold of the last few days has occasioned an increase of the seasonable epidemic, influenza; and the "grippe" is now holding one-half, at least, of the Lutetian population by the throat.

Paris, Dec. 31, 1861.

# Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on the 26th December, 1861:—

Astey, William, Leeds.
Fryer, John, Newbiggin, Hishopdale, Yorkshire.
Gwynn, Edmund, Caterham, Surrey.
Haward, Edwin Philpot, Henley-street, Cavendish-square.
Hughes, John Evans, Pwllheli, North Wales.
Passmore, Thomas Henry, Grenada, W.I.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of the Council of this institution on the 19th ult., the following condolence with her Majesty the Queen, on the death of his Royal Highness the Prince Consort, was submitted by the president, and ordered to be engrossed and sent to the Home Office, viz.:—

"May it please your Majesty,—We, your Majesty's most dutiful and loyal subjects, the President, Vice-Presidents, and Council of the Royal College of Surgeons of England, desire humbly to offer our sincere and respectful condolence with your Majesty under the deep affliction which your Majesty and your illustrious House have sustained by the sudden and unexpected decease of his Royal Highness the Prince Consort. With a profound sense of loyalty and of sorrow for the irreparable loss which your Majesty and the Royal Family have personally experienced, we share in the universal feeling that a most grievous loss has also fallen upon the whole nation. If the prosperity and happiness of the British empire have largely increased, if art and science have rapidly advanced, if a higher tone of moral and religious feeling prevails, we cannot but be sensible that the personal character and talent of his Royal Highness the late Prince Consort, and his zealous and persevering endeavours to promote the public welfare on all occasions, have contributed very greatly to these benefits. We trust that your Majesty may derive some mitigation even of this heavy affliction, from the knowledge that the great services rendered by his Royal Highness to his adopted country have long been appreciated, and will be gratefully remembered by every reflecting person in your Majesty's dominions.

"Given under our common seal this 19th day of December, 1861."

Addresses have also been presented during the past week from the Presidents and Fellows of the Royal Colleges of Physicians and Surgeons of Edinburgh.

UNIVERSITY OF LONDON.—Convocation has been summoned to exercise its privilege of nominating a list of persons for submission to the Queen, one of whom is to be selected to fill one of the vacancies in the Senate.

BIRKENHEAD INFIRMARY.—Mr. John Laird, the new member for Birkenhead, has crowned his success by undertaking to present to the borough an infirmary, which he will engage to erect at a cost of £3000.

NEW LUNATIC ASYLUM.—The Irish Government have ordered the erection, near Downpatrick, of an asylum sufficient to accommodate 300 lunatic poor, to be called the Down District Lunatic Asylum.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.—At the Quarterly Court of this institution, held on Monday last, the following letter (to the Treasurer) was read from Gen. Bruce:—"Sir,—I have been commanded by the Prince of Wales to forward to you the enclosed cheque for £100, and to request that it may be accepted as a donation to the funds of Addenbrooke's Hospital, as a mark of the estimation in which his Royal Highness holds that excellent and benevolent institution." In a report from a committee appointed to consider the expediency of providing a new building for the out-patient department, it was recommended to purchase a piece of land near to the railway station at a cost of £640, to build an entirely new hospital on a different site, and to sell the whole of the present hospital grounds and building. The governors adopted only that portion of the report recommending the purchase of the land.

NURSES FOR CANADA.—We understand that a body of trained nurses, on Miss Nightingale's plan, are to proceed at once from the Herbert Hospital to Halifax.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.—THE TREASURER'S APPEAL REPLIED TO BY A COUNTRY PRACTITIONER.—"You ask for a double contribution this year, on the ground of enlarging the Widows' and Orphans' Home; and you especially desire that those who have not yet supported the College should make this the opportunity of so doing. Well, remembering that all I have I owe to God's blessing on my efforts, and not unforgetful of the shortness of life, I will, even to the sacrifice of personal claims (for here alone is true charity), promise you an additional subscription; and thus shall my heart be cheered by the luxury of doing good. I will also pledge myself to enforce the claims of the College on my well-to-do neighbours, believing as I do that 'he who giveth to the poor lendeth to the Lord.'"

THE CHANCELLORSHIP OF THE UNIVERSITY OF CAMBRIDGE.—Every man who respects learning more than rank will rejoice that Cambridge has found in the person of the Duke of Devonshire a candidate for the Chancellorship whose unostentatious learning is even greater than his rank. As Lord Cavendish, he sustained the honour of a name dear to science, by taking the place of second wrangler at the University; and he took a high place in the first class of the classical tripos. In the contest for Smith's Prize, he changed places with the man who beat him for the senior wranglership. Such signal success stamped Lord Cavendish as the most distinguished graduate of his year. As Earl of Burlington he was the first Chancellor of the University of London. Cambridge may well be proud of him. Not often does the opportunity occur of honouring in exalted rank qualities and acquirements that have earned for their possessor a foremost place in the struggle for literary and scientific fame.

INVESTIGATIONS ON HYDROPHOBIA IN DIFFERENT PARTS OF EUROPE, ESPECIALLY IN UPPER ITALY. BY M. BOUDIN.—The geographical study of rabies furnishes powerful arguments against the spontaneous origin of the disease. In 1856, there were 75,446 dogs in the Department of the Seine; and, in 1857, the number had only fallen to 64,408. In France, there are two cases of rabies out of every milion of inhabitants. At the veterinary school of Alfort, 42 rabid dogs were received in 1856; only 12 in 1857; and as much as 56 in 1858. Out of 239 cases of rabies recorded in France, there were 157 men and 64 women. Out of 228 persons bitten in France, 188 were bitten by dogs, 26 by wolves, 13 by cats, and 1 by a fox.

Respecting the seasons of the year, it has been found, by returns lately published in France, that out of 181 cases of rabies in human beings, 40 were recorded in December, January, and February; 44 in March, April, and May; 66 in June, July, and August; and 31 in September, October, and November. Out of 147 cases of rabies noted in France, the period of incubation was, in 26 cases, less than 1 month; in 93 cases, from 1 to 3 months; in 19 cases, from 3 to 6 months; and, in 9 cases, from 6 to 12 months. Out of 161 cases observed in France, the duration of confirmed rabies was not more than 2 days in 34 cases; 4 days in 98 cases; 6 days in 24 cases; 7 days in 2 cases; 8 days in 1 cases; and 9 days in 1 case. In England and Wales, the deaths from rabies were 25 in 1851, 15 in 1852, 11 in 1853, 16 in 1854, 14 in 1855, 5 in 1856, 3 in 1857, and 2 in 1858. In Prussia, the deaths from the same cause were 20 in 1844,

15 in 1845, and 28 in 1846. In the Austrian Empire, the deaths from rabies were 589 from 1830 to 1838; and 449 from 1839 to 1847. In Bavaria, there were 39 from 1844 to 1850. In 1851, the disease reigned epidemically in the north of Germany; at that period no less than 267 cases of rabies were observed in dogs at Hamburg and its vicinity. From 1829 to 1854, 35 patients suffering from rabies were received into the Great Hospital at Milan (19 males and 16 females). In 1832, '33, '36, '39, '47, and '50, no cases of rabies were received in that hospital; but 5 were admitted in 1849, 4 in 1838, 4 in 1854, 3 in 1851, and 2 in 1830, '35, '37, and '48. In the other years, only 1 case was admitted. Out of these 35 patients, 17 were less than 15 years old—an enormous proportion, which is probably the result of the habit of children to play with animals. In none of these 35 patients did the symptoms appear before the 15th day, and with one of them the incubation was from 170 to 175 days. With none of these patients did death occur before the 25th hour after the appearance of the first symptoms. The author himself, however, saw a case of rabies at the hospital of Versailles, in 1846, where the patient died 2 hours after the disease had appeared. From other figures mentioned by the author, it is proved that neither the muzzling of dogs nor the cold season of the year supplies a safeguard against the rabid bites of these animals.

PROPOSED MONUMENT TO SIR HUMPHRY DAVY, AT PENZANCE.—A committee of working men, which has recently been formed for the purpose of erecting a monument at Penzance to Sir Humphry Davy, have received eight designs from eminent architects, of which those of Messrs. Salter and Perrow have been selected. These designs are two in number: a monumental column surmounted by a bronze statue ten feet in height; and a monumental tower, with an internal staircase, and surmounted by the same figure—the height of the monument, from the base to the summit, to be 120 feet in either case.

NAVAL GOOD SERVICE PENSIONS.—In compliance with the terms of the Royal Warrant of May, 1859, two distinguished naval medical officers have been nominated recipients of good service pensions of £100 a year. The officers selected are Dr. John Wilson, Medical Inspector-General, late of Greenwich Hospital, and Dr. Alexander Nisbet, late Medical Inspector-General of Haslar Hospital.

GOVERNMENT EMIGRATION.—The "Annie Wilson," of 1118 tons, Captain James Dickett, sailed from Birkenhead for Sydney, New South Wales, on the 30th ultimo, with the following number of emigrants:—44 married couples; 128 single men; 131 single women; 37 boys, twelve years of age and under, and 38 girls of the same ages, making a total of 422 souls, equal to 380½ statute adults. The emigrants were under the care of Surgeon-Superintendent James Sheridan Hughes, M.D.—The Government emigrant vessel, "John Vanner," 726 tons, Captain Moore, is now embarking emigrants at Southampton, for Table Bay, Cape of Good Hope, under the direction of Surgeon-Superintendent William Domett Stone, M.R.C.S. Eng.

CLOTHING OF THE POLICE.—Mr. Borlase Childs, the surgeon to the City police force, has just issued a report, addressed to the Police Committee, upon the subject of the clothing of that body, which contains some very interesting details. After a few introductory remarks, Mr. Childs says:—"The hat now worn by the police force fulfils no indication which the covering for the head of men so exposed requires. It affords no protection in a struggle, for it either immediately falls, or is struck off; and the man, becoming conscious that his head is exposed to great danger, hesitates, and begins to think only of self-defence. It is, moreover, heavy, weighing fourteen ounces, even when dry; offers no protection to the eyes, face, ears, or neck; causes headaches, &c.; not being arched, it does not sufficiently, even if kept on, protect the head from a blow, no matter what may be its strength; while, as to appearance, it presents the additional absurdity of superadding a civilian's hat (the worst covering for the head ever invented) to a semi-military dress. ..... The coatee worn at present by the force is the relic of a past age; it affords no protection from wet or cold to the vital organs contained within the cavities of the abdomen or pelvis, nor does it afford covering or warmth to the haunches and limbs. In its place, ought to be substituted a tunic; full, handsome, and provided with ventilation in the armpits, and sufficiently warm to protect the wearer in our cold, damp, variable climate. The modern trousers, when made of good material, and sufficiently elastic, have been proved the best; but the trousers, as generally made, do not give full protection to the joints. Cold and damp aid in the production of rheumatism and other diseases in these parts; to remedy which it might be advisable to strengthen the trousers on the inside over the knee, in those especially who may be liable to rheumatism, and to afford the shins and ankles additional protection from wet by the use of waterproof leggings, worn over the trousers. But, whatever plan may be adopted, care must be taken so as not to interfere with the circulation in the superficial veins of the limbs."

CONGENITAL CRANIAL CYST.—M. Foncteau has published a case of this kind in the "Recueil des Travaux, &c., d'Indre et Loire." The cyst was, as usual, situated on a level with the posterior fontanelle, and pediculated. It was dark, fluctuating, and divided by a vertical furrow into two equal lobes. The greatest diameter was transverse, and the circumference measured thirteen inches, whilst the pedicle measured four. The head of the child was dragged backwards by the weight of the tumour. M. Foncteau strangulated the pedicle by three knots, and each lobe was emptied separately by puncture; the first yielded nine ounces of a serous fluid; the second the same quantity, but mixed with blood. The cyst filled again on the next day to half the former size, and the child, having gradually become weak, died on the next day. On examination, the tumour was found to communicate with the superior longitudinal sinus by an opening which would admit the tip of the little finger. There were three distinct cavities filled with blood; this fluid, added to what had been lost by puncture, sufficiently accounted for the death of the child.

DIABETES TREATED BY SUGAR.—M. Rigodin, taking as a basis of treatment the experiments of Dumas and Bernard, by which they have proved that sugar in the economy is indispensable to life, thinks that it is rational to *give* sugar in diabetes, as patients suffering from this malady lose large quantities of it. By depriving these patients of fecula sugar, they must be made worse, for they are deprived of the means of making up for saccharine losses. M. Rigodin, therefore, allows a diet, in which sugar-yielding substances play a great part; but as he also gives Vichy water, the cases are not so conclusive as might be wished.

HEALTH OF LONDON DURING THE WEEK ENDING SATURDAY, DECEMBER 28TH.—In the week ending last Saturday (December 28th), 1148 deaths were registered in London. The mortality from small-pox is much below the average. Only 19 deaths from measles occurred last week. The deaths by scarlatina and diphtheria are in excess of their respective averages. Whooping-cough was fatal to 45 children. The fever of London assumes three forms, which are respectively designated typhus, typhoid (typhia), and relapsing fever (typhinia). Fifty persons died of these fevers last week. The typhoid fever, sometimes called gastric fever, for it affects the intestines, is propagated in air and water by the excretions which are accumulated in the cesspools and sewers of cities. Its ravages will be reduced effectually when this matter is restored every day to the cultivated soil, of which it is a natural constituent. The mortality from diarrhœa is rather below the average. The pulmonary complaints now fatal to a considerable extent are bronchitis and pneumonia; 108 children died under the age of 15 years, 35 persons between 15 and 60, and 37 at 60 years and upwards died of those diseases. Eight women and one man were registered at the advanced age of 90 years and upwards; the oldest was a woman, aged 99 years.

The births registered in London were—boys, 780; girls, 743.

## MEDICAL VACANCIES.

THERE is a vacancy for a Medical Officer for the department provided for Diseases of the Skin at University College, in consequence of the resignation of Professor Jenner, M.D., who retains the special professorship of Clinical Medicine.

A vacancy exists for a Medical Officer for the North-West District of the Parish of St. Pancras, Middlesex.

A Medical Officer is required for the Huntington District of the Kington Union.

A Medical Officer is wanted for the Furness Abbey Lodge of the Independent Order of Odd Fellows, at Dalton in Furness, Lancashire.

The office of House-Surgeon to the Warneford Hospital, Leamington, is vacant.

The Lectureship on the Theory and Practice of Medicine at the Ledwich School of Medicine, Dublin, has become vacant by the death of Dr. Cuthcart Lees.

A Physician is required at the Dispensary, Weston-super-Mare, Dr. James Hurley Pring having resigned.

The office of House-Apothecary and Assistant to the Hon. Secretary at the Bridgwater Infirmary is vacant.

## MEDICAL APPOINTMENTS.

MR. ALEX. BRYSON, Dr. James M'Bain, and Dr. John Colóstream, have been elected Presidents of the Royal Physical Society of Edinburgh, for the session 1861-62.

Mr. Edwin Allen Maling has been appointed House-Surgeon and Secretary to the General Infirmary and Dispensary, Sunderland, in the room of Mr. H. J. Teld, resigned.

Mr. G. C. Gilchrist, of Newcastle, has obtained the Medical Scholarship at Durham University, of the value of £35 a year, tenable for four years.

Mr. Tom Oliver Hunt has been elected Medical Officer for the Pembridge District of the Kington Union, Herefordshire, vice Mr. S. Davies, resigned.

Mr. James Foley has been appointed Medical Officer for the Killeagh Dispensary District in the Youghal Union, Co. Cork, vice Mr. Francis Jervois, resigned, from ill health.

Mr. Rawdon Macnamara, M.R.I.A., Professor of Materia Medica at the Royal College of Surgeons in Ireland, and one of the surgeons to the Meath Hospital, has been appointed Medical Referee to the Argus Life Assurance Company, in the room of the late Dr. Brereton.

# Births, Marriages, and Deaths.

## BIRTHS.

On the 16th Nov., at Morar, Gwalior, East Indies, the wife of Dr. J. C. Bow, Bengal Army, of a daughter.

On the 20th ult., at Clarence-street, Liverpool, the wife of John Sinclair, M.D., of a son.

On the 20th ult., at Hawkhill, near Edinburgh, the wife of A. Christie, Esq., late of the Bengal Medical Service, of a son.

On the 27th ult., at Gateshead Dispensary, the wife of Robert J. Banning, M.D., of a son.

On the 29th ult., at Eldon-square, Newcastle-upon-Tyne, the wife Mr. Alex. Mosely, surgeon-dentist, prematurely of a daughter.

## MARRIAGES.

On the 24th ult., at Hagbourne Church, J. C. Montague Thomas, M.D., of Windsor, to Mercy, youngest daughter of the late Joseph Humfrey, Esq., of Upton, Berks.

On the 27th ult., at Queen-street, Edinburgh, Charles R. Kinnear, M.D., Deputy Inspector-General of Hospitals and Fleets, to Margaret Barton, second daughter of the late Benjamin M'Nair, Esq., of Greenfield, Lanarkshire.

On the 28th ult., at St. Mary Abbotts, Kensington, John A. Harvey, Esq., M.R.C.S.I., to Annie, youngest daughter of the late Nathaniel Marshall, Esq.

## DEATHS.

On the 16th ult., at Earlston, near Edinburgh, Richard Hewat, Esq., late Army Surgeon.

On the 22nd ult., at Waterloo-place, Blyth, Margarettia, daughter of J. Lynch, Esq., L.S.A., aged 7 years.

On the 26th ult., at the Dispensary, Doncaster, Lydia, wife of Robert H. White, Esq., House-Surgeon, aged 29 years.

On the 28th ult., at Dorset-square, Margaret, wife of J. Ridge, M.D.

Surgeon G. M. Ogilvie, Bombay Army, Inspector-General of Prisons; Assistant-Surgeon J. E. Freeman, M.D., 18th Bombay N.I.; late Assistant-Surgeon Parsons Wall, H.M. 64th Regt.

# Medical Diary of the Week.

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| MONDAY, JAN. 6 | ROYAL FREE HOSPITAL.—Operations, 2 P.M.<br>METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.<br>ODONTOLOGICAL SOCIETY OF LONDON. — 8 P.M. Anniversary.<br>MEDICAL SOCIETY OF LONDON.—8½ P.M. Clinical Discussion. |
| TUESDAY, JAN. 7 | GUY'S HOSPITAL.—Operations, 1½ P.M.<br>WESTMINSTER HOSPITAL.—Operations, 2 P.M.<br>ROYAL INSTITUTION.—3 P.M. Prof. Tyndall, "On Light." (Juvenile Lecture.)<br>PATHOLOGICAL SOCIETY OF LONDON. — 8 P.M. General Meeting for Election of Officers. |
| WEDNESDAY, JAN. 8 | MIDDLESEX HOSPITAL.—Operations, 1 P.M.<br>ST. MARY'S HOSPITAL.—Operations, 1 P.M.<br>UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M.<br>ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M.<br>GEOLOGICAL SOCIETY OF LONDON.—8 P.M. |
| THURSDAY, JAN. 9 | ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.<br>CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 1 P.M.<br>LONDON HOSPITAL.—Operations, 1½ P.M.<br>GREAT NORTHERN HOSPITAL, KING'S CROSS.—Operations, 2 P.M.<br>LONDON SURGICAL HOME.—Operations, 2 P.M. |
| FRIDAY, JAN. 10 | WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M. |
| SATURDAY, JAN. 11 | ST. THOMAS'S HOSPITAL.—Operations, 1 P.M.<br>ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.<br>KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.<br>CHARING-CROSS HOSPITAL.—Operations, 2 P.M. |

## THE LANCET INQUIRY
ON THE
# INFLUENCE OF RAILWAY TRAVELLING UPON PUBLIC HEALTH.

THE EDITOR of THE LANCET, being desirous that the conclusions on this subject should be based on the largest and most exact foundation of facts, will feel obliged by any further communications of professional experience in respect to it. The communications will be considered confidential if desired. In the statement of cases, particulars should, if possible, be given as to name, age, sex, occupation, the distance and frequency of journeys, state of health, and symptoms attributed to railway travelling.

# THE ANALYTICAL SANITARY COMMISSION.

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# To Correspondents.

*Quinidine.*—Quinidine is one of the alkaloids found in the cinchona barks. It bears a very close resemblance to quinine, being found in the cinchonas of New Grenada in large proportions, and side by side with quinine, but in much smaller quantities in Bolivian cinchonas. It may probably be found equally advantageous as the salts of quinine, but is generally supposed to require to be given in larger doses. Quinoidine is the residue left in the mother liquors, from which quinine has been separated. It contains quinine in an amorphous state, cinchonine, and quinidine, with small quantities of other bases, the nature of which has not been determined. It is also a valuable antiperiodic. Hospital or unbleached quinine is sulphate of quinine, with various proportions of the other alkaloids existing in the cinchona bark from which the unbleached sulphate has been prepared.

*Mr. H. Baker*, (Brentwood.)—It would have been more courteous on the part of the Coroner, and more consistent with the usual practice, if he had given the order for examining the body to Mr. Baker.

*A Correspondent* inquires where the new Indian remedy for small-pox, called Sarracenia purpurea, can be procured?

*F.R.C.P.*—The reviewer of "The Roll of the Royal College of Physicians," by Dr. Munk, in the *Saturday Review*, is unacquainted with the subject he presumes to discuss. In the first twenty lines of the review there are no less than four remarkable oversights. In the 8th and following lines it is stated that "the College had at first jurisdiction over the faculty only in and within seven miles of London; but by statute a few years afterwards its powers were enlarged, to embrace the profession throughout England, when none, save graduates of the Universities," (Oxford and Cambridge,) "were henceforth to practise unless examined and approved by the officers." This is not strictly correct. The College as a body never had any power over provincial practitioners. The statute of Henry VIII. gave that power to a body of eight elects, who were to be Fellows of the College, but independent of it, since they were self-elected as vacancies occurred. The President of the College was obliged to be one of the eight, and was chosen by the elects, the College having no vote. The elects have now, by a friendly Act passed last session, ceded their privileges. In line 13 it is thus stated—"It is a remarkable fact that Linacre's house in Knightrider-street continued to be the place of meeting of the College until, in 1600, it was pulled down to make room for the new Court of Probate." This is wholly untrue. The house, No. 5, in Knightrider-street had been either part of the residence of Linacre, or more probably had been built on the site of it. The supposition that it was *not* the original house is sustained by the fact that there was a stone inserted in the street front, carved with the arms of the College, which arms were not obtained till the time of Caius. The physicians first met at Linacre's house, adjoining which an anatomical theatre was built in 1615. About the time of the accession of Charles I., they leased premises in Amen-corner of the Dean and Chapter of St. Paul's. This property was subsequently bought by Dr. Harvey, and presented to the College. The buildings were destroyed during the great fire, and in 1674 a new and noble building was completed in Warwick-lane. This building is still in existence; but was occupied by the College till the year 1825, when the present College in Trafalgar-square was built by private subscription amongst the Fellows. In line 17 it is asserted—"He (Linacre) and the other earliest members were *necessarily* ecclesiastics, and some of them held high church preferment under the Tudor Kings." This again is a mistake. Linacre, it is true, when in the decline of life, took orders. He happened to have great interest with the patrons of preferment, which he used to his own advantage, after the corrupt fashion of the time. He accepted pieces of preferment, and resigned them in turn in favour of friends, receiving from them a portion of the proceeds. Dr. John Chambre, whose name stands first in the original Charter, and who was physician to Henry VIII., seems to have done the same thing; but these were only isolated instances, and the assertion that all took orders is quite gratuitous.

*A Sufferer.*—We have heard of arsenic-smoking in asthma, and believe it to be a favourite remedy of the Chinese. Of its utility we cannot speak.

### WET-NURSING.

*To the Editor of* THE LANCET.

SIR,—In your "Parisian Medical Intelligence," given in THE LANCET of the 14th December, a very important statement is made, bearing on the above subject.

The statistics in connexion with the Foundling Hospitals of Lyons show that "during the year 1860 it was remarked that whilst children suckled by the nurses died in the proportion of 1 in 290, those suckled by their mothers averaged 1 only in 441"—i. e., the amount of mortality in children given over to strange milk is nearly double that of those who are fostered and cared for by their own mothers! This is an important fact worthy of the thoughtful attention of the medical profession; for they have it greatly in their power to check a practice which is so disastrous to such a large proportion of the infant population.

The above figures, full of meaning, are not peculiar to any one district or country. Wherever the custom of wet-nursing prevails, there will be found its attendant evils. This subject, in all its bearings, has been elsewhere so fully discussed, that I will do no more now than direct attention to the facts as above stated. Information, derived from authentic sources, that can throw any light on this interesting question deserves all the publicity that can be given to it.

I am, Sir, yours, &c.,
December, 1861. M. A. B.

*Mr. Walter Chapman*, (Tooting.)—In the absence of any specific contract, Mr. Chapman has no *legal* claim against the executors. A master is not liable for the medical attendance on his servant, unless he has specifically contracted with the medical attendant to pay him. But there never was a case in which the *equitable* claim of a surgeon for attendance upon a servant was stronger than that of Mr. Chapman. We cannot see upon what just grounds the executors rely for exemption from payment. The bill rendered is, under the circumstances, reasonable and fair; and notwithstanding the opinion of "gentlemen of standing" in Mr. Chapman's profession, we take leave to say that the withholding payment on the pleas advanced would be an act of injustice to Mr. Chapman.

*Justitia.*—We can furnish no information on the matter. Surely the proceedings of the individual in question are sufficient grounds on which to form an estimate of his character.

*Mr. Baker Brown and Dr. A. P. Stewart.*—The documents which we have received relating to a professional misunderstanding between these gentlemen afford striking evidence of the necessity of a Court Medical. In such a dispute it is evident that no satisfactory conclusion can be arrived at by a long epistolary correspondence. As Mr. Brown offered in the first instance to submit the case to arbitration, we think Dr. Stewart was in common fairness bound to accede to that offer.

### ST. THOMAS'S HOSPITAL.

*An Old St. Thomas's Man, A Practitioner of Kennington, &c.*—We regret that we have no space this week for any of the many excellent letters we have received concerning the future site for St. Thomas's Hospital. We rejoice to find that the feeling of the medical practitioners south of the river, who above all others are competent judges of the wants of the population, is so generally in favour of retaining the hospital in its ancient district.

*House-Surgeon.*—M. Maisonneuve has actually used his caustic arrows (caustique en flèches) to remove the hand and part of the forearm in a case of hospital gangrene. Death is said to have followed, but that the operation did not bear any relation to the cause. The surgeon in question is always at something new. His latest inventions are "urethrotomes" and "tracheotomes."

*An Old Subscriber of* THE LANCET, (Bath.)—1. He must obtain the permission of the authorities.—2. Not that we are aware of.

### NAVAL SURGEONS.

*To the Editor of* THE LANCET.

SIR,—As there will be a large demand for assistant-surgeons in the event of war, I cannot refrain from giving a few words of warning to intending applicants.

The Admiralty have a good way of making the service popular by appointing you, on joining, to large ships. A year or two having elapsed, you are superseded, and sent to a small craft, where you are cooped up for four years. Your messmates may be master's assistants, about eighteen years of age, and a second master, about twenty, who, being senior executive officer, presides at meals, and offends your ear with bad grammar. He also seizes every opportunity of letting you know he is your superior officer.

I will not occupy your valuable space by multiplying instances similar to the above. Discontent prevails very generally amongst us. There are some who, by good fortune or interest, get always good appointments, but they are the exception. In short, let medical men look to the Navy as the last way of earning a livelihood, and only to be thought of when other means have failed.

I remain, Sir, yours truly,
December, 1861. R.N.

*P.R.S.*—Our correspondent is partly right. Dr. C. T. Jackson, one of the Boston committee, objected and excepted to the clause in the Report, in which "all mixtures of ether and chloroform" are denounced. He believes that a mixture of four measures of ether and one measure of chloroform may be employed without danger, or with very little danger, and that the risks from chloroform are diminished more than four-fifths by this combination. Dr. Jackson believes it to be necessary to have an anæsthetic agent of less bulk than ether, and not so dangerous as chloroform, for army uses, and asserts that this mixture, which he has tried, completely answers the purposes needed.

*A. W. L.*—1. Yes.—2 and 3. He can recover.

*Mr. E. Summers.*—Mr. Milton's papers were published in THE LANCET for 1854, vol. i., pages 243, 269, 467, 595.

*An Assistant* (North Britain) may refer to M. Grisolle's "Pathologie Interne" for a good *résumé* of the history of "pelvic cellulitis."

### POISONING BY MISTAKE.

*To the Editor of* THE LANCET.

SIR,—Feeling that any suggestion is of importance which may tend to prevent the fearful results (now so frequent) of administering by mistake poisonous drugs in lieu of the medicine intended to be taken by the patient, I take the liberty of proposing, through the medium of THE LANCET, that instead of using the ordinary coloured glass bottles, labelled "Poison," &c., which are only distinguished by the patient or attendant during the day or by artificial light, that all bottles used for poisons, lotions, &c., should be rough or prickly on their external surfaces. The sense of touch will thus be sufficient to detect at once the contents of the bottle. A plain portion could easily be left for the purpose of attaching the necessary labels.

I am, Sir, yours, &c.,
January, 1862. W. D. N., M.R.C.S.

COMMUNICATIONS, LETTERS, &c., have been received from — Mr. Savory; Mr. Solly; Dr. Brinton; Dr. Noel, Tooting; Mr. H. Tofts, Cambridge, (with enclosure;) Mr. Y. J. Moore, (with enclosure;) Dr. Hollis, Yarmouth; Mr. S. J. Brand, Bungay; Dr. Warwick, Southend, (with enclosure;) Mr. C. Ashenden, Hatfield; Mr. J. E. S. Lawson, Egremont, (with enclosure;) Dr. Allenheads, (with enclosure;) Dr. Steggall; Mr. W. Crofts, Edington, (with enclosure;) Mr. G. Arulson, Haydon Bridge, (with enclosure;) Dr. Seward, (with enclosure;) Mr. B. W. Brown, (with enclosure;) Mr. Blanshard, (with enclosure;) Sir James Clark, Osborne; Messrs. Harvey and Reynolds, Leeds, (with enclosure;) Dr. Forbes, Inverness; Mr. K. King; Mr. J. D. Bird, Stockport; Dr. Duncan, Tunbridge; Dr. Gairdner, Edinburgh; Mr. Baker, Brentwood; Mr. T. Jones, (with enclosure;) Mr. C. Patchitt, Radford, (with enclosure;) Dr. Joy, Dublin, (with enclosure;) Mr. Greenwood, Liverpool; Mr. Mackenzie, Glasgow; Mr. J. L. Davies, Highbridge, (with enclosure;) Mr. Stewart; Mr. Slee; Mr. Beeley, Holmfirth, (with enclosure;) Mr. North; Mr. Haworth, (with enclosure;) Mr. Hewitson, Allenheads, (with enclosure;) Mr. Corby, Northampton; Mr. Earlam, Northwich, (with enclosure;) Dr. Ager, Aylsham; Mr. Bagden, Maidstone; Mr. Temple, Kington, (with enclosure;) Dr. Adams, Great Wakering, (with enclosure;) Mr. J. W. Roe, Ellesmere, (with enclosure;) Dr. Kernot, Poplar, (with enclosure;) Mr. Bell, Cockermouth, (with enclosure;) Mr. Winterbotham, Castleton, (with enclosure;) Dr. Blades, Warrington, (with enclosure;) Messrs. Maw and Son; A. H. C., (with enclosure;) W. D. N.; An Old Reader; Medicus, (with enclosure;) F. D., Bere Regis; B.N.; Quinidine; &c. &c.